IN THE MATTER OF THE APPLICATION REGARDING CONVERSION OF PREMERA BLUE CROSS AND ITS AFFILIATES

Washington State Insurance Commissioner's Docket # G02-45

PRE-FILED RESPONSIVE TESTIMONY OF:

Thomas R. McCarthy
National Economic Research Associates, Inc.

April 15, 2004

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I. Introduction

Q. Please state your name.

A. Thomas R. McCarthy.

Q. Please state your position and business address.

A. I am Senior Vice President of National Economic Research Associates, Inc. ("NERA"). NERA is a global firm of consulting economists founded in 1961. I am the head of its health care practice in the United States. My business address is 777 South Figueroa Street, Suite 4200, Los Angeles, California, 90017.

Q. Are you the same Thomas R. McCarthy that submitted pre-filed direct testimony on March 31, 2004?

A. Yes.

Q. Have you reviewed the pre-filed direct testimony submitted by the Intervenor witnesses and the consultants engaged by the staff of the Washington State Office of Insurance Commissioner?

A. Yes. Along with my NERA colleague, Dr. Scott Thomas, I have reviewed the pre-filed direct testimony of all of the Intervenor witnesses and the consultants engaged by the staff of the Washington State Insurance Commissioner Staff (the "OIC staff"). We have also reviewed the initial and supplemental reports of Dr. Keith Leffler, PricewaterhouseCoopers ("PwC"), Mr. Steven Larsen, and Mr. Aaron Katz. Finally, we have reviewed the pre-filed direct testimony of some of the witnesses testifying on behalf of Premera, including the company's chief actuary, Ms. Audrey Halvorson.

Q. With respect to the filings of the Intervenor witnesses, does this testimony cause you to change any of the opinions that you expressed in your filings to date?

A. No. The Intervenor witnesses raise several general concerns. But none of the concerns is supported by the type of research and analysis needed to determine if they are warranted. In contrast, the opinions expressed in my filings are based on extensive research using standard economic and statistical analysis. In particular, we have reviewed hundreds of documents and studies, conducted numerous interviews of Premera senior management and others, and performed a number of statistical tests to examine the likely competitive effects of the proposed conversion.

Q. Based on your research, what have you found?

A. In general, our findings are consistent with outcomes one would expect in competitive markets. More specifically, we conclude that:

- The proposed conversion is not going to "substantially lessen competition or tend to create a monopoly in the health coverage business" in the state of Washington. The markets that Premera competes in for health insurance and provider services are competitive in both structure and performance. The conversion is not going to change this. In particular, we find no evidence that the conversion is going to cause an increase in premiums to consumers or a decrease in reimbursement rates to health care providers compared to competitive levels.
- The proposed conversion is not going to reduce consumer access to health insurance products or health care providers. Premera will continue to focus on its financial viability, and it will continue to offer only those products and services that make commercial sense, whether it is a not-for-profit or for-profit company. In addition, Premera will continue to contract with health care providers in rural counties since it considers its large provider network to

be one its competitive strengths and it uses that advantage to compete for members, including the large multi-site employers that have employees located throughout the state.

II. Concerns Raised in Pre-Filed Direct Testimony of Intervenors

Q. What is your general understanding of the Intervenors' concerns in connection with Premera's conversion to become a for-profit company?

A. There are several general concerns contained in the pre-filed direct testimony of the Intervenors. All of them reflect the natural worries associated with having to deal with change to an already complex and sometimes dysfunctional health care system. However, none of the issues raised by the Intervenors is supported by rigorous research and analysis. We believe that our analysis reveals that the Intervenors' concerns and worries are unjustified.

Q. One often-expressed concern by the Intervenors is that for-profit companies must generate extra profit to pay off shareholders. Is this accurate?

A. No. Any company, whether for-profit or not-for-profit, needs access to capital. Without infusions of new capital, a company will inevitably disinvest through depreciation of its assets. There are several basic ways to obtain such capital: through retained earnings, by borrowing, and through the issuance of stock for sale to the public.[1] In each of these cases, the capital is raised at some cost to the company. Investments out of retained earnings can be highly variable and are limited by what the company can earn from year to year. Thus, they represent an unreliable and limited source of funding.

[1] A company might also sell off assets to raise investment funds, but this is sensible only to consolidate the company's core assets going forward. It is hard to invest in growth by selling off company assets, unless those assets have been deployed in uses that generate little or no contribution to overhead and profit.

Borrowing must be repaid through interest payments, which, unlike growth in share prices, show up as an explicit capital expense. Equity capital raised through the issuance of stock must be repaid by dividends, growth, or both. In each case, capital is paid for. In the absence of tax consequences, as is true for the state of Washington, financing through the issuance of stock does not create any new cost, only a different way of paying for the capital needed to remain financially viable and grow. Currently, Premera relies on only two out of the three options for raising capital. Retained earnings and borrowing have proven to be slow and sometimes inadequate as a source of financing. Access to capital through the issuance of stock will provide operational flexibility and better facilitate Premera's growth and financial stability.

Q. Several Intervenor witnesses suggest that converting from a not-for-profit to a for-profit company will make Premera behave differently and focus more on its bottom-line at the expense of community goals. Is this concern warranted?

A. This is a misplaced concern for two reasons. First, Premera already focuses heavily on its bottom-line just to remain financially viable. Competition has left Premera with thin but stable operating margins and a relatively weak surplus position. It has been able to obtain even these modest results only by shedding unprofitable lines of business and services in some geographies. Second, it is wrong to assume that for-profit companies do not care about good service at fair prices to consumers. Even shareholders want their companies to satisfy the buyers. There can be no profits without revenues from willing buyers. Premera has done its best to answer the needs of buyers and will continue to do so as a for-profit company.

Q. Many Intervenor witnesses lament how dysfunctional the health care system has become. They cite the thin margins that hospitals and physicians earn and the imminent prospect of providers being forced to drop out of the system. Do you have a response?

A. There are a several points to make about this concern. First, Premera is part of that same "dysfunctional" health care system, with a thin margin of its own. Like the providers, Premera is constantly looking for ways to lower its administrative expenses and raise revenues through growth and better product designs. Conversion is one of Premera's ways of adjusting to the ever-changing health care system. Access to capital through the issuance of stock will make Premera more flexible. Second, Premera is neither the source of the problem nor the answer to the problem. As important as Premera is to the health care system in Washington, it is not big enough to cure the ills of an ailing, underfunded, and ever-changing system. Finally, the shortfall in payments to providers is due largely to inadequate reimbursements from government programs. Premera's payments generally cover an efficient provider's costs. Given Premera's thin margins, it has not been able to rescue these providers from underfunded government payers and will not be able to do so in the future, whether a not-for-profit or a for-profit company.

Q. It appears that the Intervenors' concerns and goals are in conflict, with a direct tension between trying to achieve both lower premiums to consumers and higher reimbursements to providers. Can you reconcile this?

A. Premiums and provider reimbursements are directly linked. In particular, provider reimbursements make up the vast majority of the total cost covered by the premiums. Thus, provider reimbursements drive premiums. Premera cannot raise provider reimbursements unless premiums to consumers also go up.

Q. Few of the Intervenors address Premera's economic assurances. However, the ones that do, propose extending them. Do you agree with their proposal?

A. We believe that the discipline imposed by a competitive market makes the assurances unnecessary and may cause more problems than cures. In the few instances in which the assurances are addressed, there are calls for extending them well beyond two years. For example, Mr. Shawn Cantrell proposes that premium increases, product offerings, and network coverage be regulated for six years. Such proposals would completely disadvantage Premera relative to its competitors and cause significant distortions in the markets in which Premera competes. This would handicap Premera and, in the end, hurt consumers who may prefer Premera to adjust to the dictates of the market. Moreover, it would likely rob Premera of all the operational flexibilities it is trying to achieve by converting.

For example, Mr. Cantrell calls for six years of regulating premiums by indexing the rate of premium increase to medical cost inflation. This would require significant regulatory oversight for the OIC (e.g., what cost index should be used?; should negotiated premiums with large groups be exempt?; and, if the regulated rate increases for Premera were lower than other insurers needed to raise their rates, would they claim unfair competition by Premera?). More importantly, perhaps, such regulation would almost certainly stifle product innovations. Premiums cannot be regulated to match medical cost increases unless benefits remain constant. If new benefits are added or old benefits are subtracted at the demands of consumers, actuarial values would have to be estimated to know how the regulated premium is allowed to change and still meet the regulatory requirements. Moreover, entirely new product designs, such as medical savings accounts or defined contribution/cafeteria plans, would require new actuarial values and new

premiums to be set. Premera would not be able to respond to the market without extensive and complex rate hearings before it knew whether it could even sell its new products.

All of the above explains why economists believe that regulation often creates competitive distortions. In addition, the distortions are expected to be even more problematic in dynamic markets such as health care. Long-term assurances are unnecessary and are very likely to be harmful to Premera and to consumers who do not get the benefit of Premera's competitive responsiveness.

Q. Several Intervenor witnesses have stated that because Premera has a large share of the fully-funded business in Eastern Washington and because some insurers have stopped selling insurance in that area, this means that Premera has market power in Eastern Washington and that the company can do whatever it wants. Is this true?

A. This concern is also unfounded based on our analysis. As discussed in both our initial report and in Dr. Leffler's initial report, high market share does not necessarily equal market power. The key to assessing whether a firm has market power is to determine what would happen if the firm tried to increase its premiums above competitive levels. This is precisely the analysis that we performed in our report. If other insurers could readily enter or expand their existing operations in Eastern Washington and/or if a significant number of Premera's customers could readily shift to other health insurance options (including moving to self-insurance), then Premera lacks market power. This is why the presence of a number of large competitors in Eastern Washington (e.g., Regence/Asuris, Group Health, Aetna, CIGNA, and Health Net), all of which have a lot of experience in the health insurance business, is so important in assessing whether Premera has market power. These other competitors could quickly

expand their operations and, thus, defeat any attempt by Premera to increase its premiums above competitive levels – even if they currently have only small shares in Eastern Washington.

Similarly, competitive discipline also comes from those firms that perform only some of the functions of these larger insurers, such as network developers like First Choice, which offers a ready provider network for companies that wish to self-insure or to third party administrators and brokers who have arranged underwriting through out-of-state carriers. Moreover, the fact that some insurers have exited Eastern Washington does not indicate that Premera has market power. Instead, it just indicates that competitive conditions make it difficult to make money in Eastern Washington. Antitrust economists typically consider evidence of exiting as a signal that there are low sunk costs and, therefore, that it is relatively easy for other firms to enter the geographic area in question since it would not cost much for them to leave if they were not commercially successful. This is one of the reasons why we conclude in our report that the appropriate relevant geographic market for evaluating the likely competitive effects of the proposed conversion on the health insurance business is the state as a whole.

Certainly, as Mr. Bob Perna suggests, there are topography differences across the state of Washington. But based on our analysis, these differences do not affect the market's ability to respond competitively.

III. Lessons from Other Conversions

Q. Several of the witnesses for the Intervenors have expressed concerns about the Premera conversion based on studies from previous Blues plan conversions. Are their concerns valid?

A. No. The studies that they cite are either void of any rigorous research and analysis or they indicate mixed results that do not find any systematic problem with premiums, provider reimbursements, or consumer access. Interestingly, none of the Intervenors discusses in any detail the Feldman, Wholey, and Town study, which is the only study that has tried to rigorously estimate the effect of past conversions on premiums, provider reimbursements, and accessibility, or the Hall and Conover study, which is the only study that has been published in a peer-reviewed journal. Both of these studies are important, in part, because they were commissioned by the respective insurance authorities in the proposed CareFirst (Maryland) and Blue Cross Blue Shield of North Carolina conversions and, more importantly, because they demonstrate that the worries about higher premiums, lower reimbursements, and reduced accessibility have not resulted from the conversions that have actually been approved.

Q. Can you describe the Feldman, Wholey, and Town study in more detail?

A. The Feldman, Wholey, and Town study examined empirically what effect, if any, prior HMO conversions have had on premiums and reimbursements. The statistical methodology that they employed was based on econometric models published in two peer-reviewed economics journals. They found that prior conversions have resulted in premiums *decreasing* slightly and provider reimbursements remaining basically the

same.[2] From these results, the authors concluded: "Although health insurance markets are hugely complex, we were able to discover several patterns of behavior that appeared regularly among the converting HMOs. The results do not provide unequivocal evidence that HMO conversions are either beneficial or detrimental to the public interest."[3]

Q. What is the significance of the Hall and Conover study?

A. The Hall and Conover study took a different approach to answering the same question. Instead of empirically testing whether past conversions have changed plan behavior and have led to access problems, they conducted interviews with market participants. They found that most market participants felt that there was little change in the plans' behavior in pricing, underwriting, and product offerings after the conversions took place.[4] They also found that most market participants felt the primary drivers in the plans' behavior are the competitive market forces and regulatory rules, rather than organizational form or corporate culture.[5] Based on their interviews, they concluded that, "conversions don't have a strong or consistent negative effect on affordability or accessibility."[6]

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[2] See R. Feldman, D. Wholey, and R. Town, "The Effect of HMO Conversions to For-Profit Status," Final Report, February 4, 2003, p. 2, a copy of which is attached as Exhibit A.

[3] *Ibid.,* p. 2.

[4] See OB/GYN News, "Access, Care Unharmed by Blue Cross Conversions: Uninsured Rates Have Not Risen," August 15, 2003 (a copy of which is attached as Exhibit B); also, C. Conover and M. Hall, "Summary of Key Informant Interviews," Appendix B to their report prepared for the North Carolina Insurance Department, October 11, 2002. A version of the Hall and Conover study was published in *The Milbank Quarterly* in the fall of 2003. [See M. Hall and C. Conover, "The Impact of Blue Cross Conversions on Accessibility, Affordability, and the Public Interest," *The Milbank Quarterly* Vol. 81, No. 4 (2003), a copy of which is attached as Exhibit C.]

[5] *Ibid.*

[6] See OB/GYN News, "Access, Care Unharmed by Blue Cross Conversions: Uninsured Rates Have Not Risen," August 15, 2003.

IV. Inconsistencies in Pre-Filed Testimony of the OIC Consultants

Q. Did you find inconsistencies in the pre-filed direct testimony of the OIC consultants?

A. Yes, we found several inconsistencies with respect to the testimony on actuarial, economic impact, and antitrust issues.

A. Actuarial Testimony

Q. What inconsistencies did you identify with respect to the testimony on actuarial issues?

A. Ms. Lichiou Lee is an actuary for the OIC. In paragraphs 15 and 16 of her pre-filed direct testimony, Ms. Lee examines whether "there are ways that Premera may be able to increase its competitiveness in certain regions by setting the area factors." She presents two hypothetical situations to show how this could occur. In her first hypothetical, she examines the effect of removing the area factors for the small group products. As an illustrative example she assumes (1) that there are only two area factors – one for Eastern Washington and the other for Western Washington, (2) that the monthly premiums with the area factors are $180 in Eastern Washington and $200 in Western Washington, and (3) that the monthly premiums without the area factors are $190 in both regions. This last assumption reflects the state's regulatory requirement that the total revenue will remain the same with or without the area factors – which is often referred to as the revenue neutrality requirement. Based on this hypothetical, Ms. Lee concludes that Premera may be able to "increase its competitiveness" in Eastern Washington, by which I assume she means that Premera may be able to increase its margin in Eastern Washington (assuming, of course, that competition would allow Premera to keep the same business at higher prices).

Although Ms. Lee's first hypothetical shows how Premera could increase its margin in Eastern Washington, it is inconsistent with the PwC assertion that Premera has the ability to increase its overall margin by manipulating the rate filings.[7] This is because, under revenue neutrality, if Premera *increased* its premiums in Eastern Washington, it would have to *decrease* them in Western Washington to keep its total revenues unchanged. Thus, Premera's overall margin in this example would stay the same. Moreover, this hypothetical is unrealistic because it ignores the fact that the majority of Premera's small group business is located in Western Washington and that medical costs are higher in Western Washington. This means that, if Premera tried to "increase its competitiveness" in Eastern Washington by eliminating the area factors, this strategy would likely result in Premera earning an *overall lower margin.* Premera would lose much more revenue in Western Washington than it would gain in Eastern Washington.

Q. Did you identify any other inconsistencies with respect to Ms. Lee's pre-filed direct testimony?

A. Yes. In her second hypothetical, Ms. Lee examines the effect of lowering provider reimbursements without changing the area factors. In her second illustrative example, she assumes (1) that Premera can and does lower its provider reimbursements in certain geographic areas – presumably Eastern Washington, (2) that Premera does not change or update its area factor to reflect the lower provider reimbursements, and (3) that Premera continues to charge the same premiums as it did before lowering the provider reimbursements. Based on this hypothetical, Ms. Lee concludes that Premera may be

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[7] See, e.g., PwC report titled "Economic Impact Analysis of the Proposed Conversion of Premera Blue Cross for the State of Washington," dated October 27, 2003, Table 9-2.

able to increase the operating margin in certain geographic areas as a result of earning the same amount of revenues while paying lower medical costs.

Although Ms. Lee's second hypothetical shows that Premera could earn greater margins in certain geographic areas if it had the ability to decrease provider reimbursements, it is inconsistent with Dr. Leffler's conclusion that Premera may not have this ability. In particular, Dr. Leffler has concluded that Premera may have already fully exercised whatever market power it possesses as a buyer of provider services in Eastern Washington under the current regional reimbursement and contracting procedures.[8] Moreover, for this second hypothetical to result in a permanent increase in Premera's overall margin, Premera would either have to lie about its provider costs and be willing to violate the adjusted community rating requirement (which requires Premera to adjust its area factors to reflect changes in expected medical costs if Premera uses such factors) or the company would have to be willing to explicitly increase its overall contingency and risk factor to avoid lowering its base rate premiums in its next filing (which could cause the OIC to conclude that Premera's premiums are unreasonable in relation to the amount charged). However, the first possibility (i.e., lying) seems very unlikely and the second possibility (i.e., changing its contingency and risk factor) is something Premera could already do even absent the conversion. The reality is that Premera's contingency and risk factor is limited by competitive forces that keep premiums from rising and causing Premera to lose business to competitors.

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[8] See Report of Keith Leffler, Ph.D., p. 4.

B. Economic Impact Testimony

Q. What inconsistencies did you identify with respect to the economic impact issues?

A. We found a second set of inconsistencies in the pre-filed direct testimony of the OIC consultants dealing with the "economic model" in the PwC economic impact report.[9] That report has been attached as an exhibit to the pre-filed direct testimony for three of the PwC witnesses: Ms. Sandra Hunt, Mr. Martin Staehlin, and Dr. Edward Gold. In depositions, the PwC witnesses all testified that Dr. Gold was the PwC person responsible for the economic model. In turn, Dr. Gold testified that all of the regulatory constraints in Washington were addressed by Mr. Staehlin but that none of them were incorporated into the PwC economic model.[10] So the PwC model that is used to estimate whether and by how much Premera could raise premiums in Eastern Washington does not recognize that the very choices it asserts Premera could make are, in fact, constrained by regulations already at the disposal of the OIC.

Table 9-5 of the PwC economic impact report purports to provide an estimate of how much Premera will have to increase its premiums after the conversion in order to achieve the target margins that PwC believes Premera will have to achieve to succeed as a for-profit company. The methodology used to derive the figures in this table is inconsistent with the pre-filed direct testimony of Ms. Lee. In particular, as described above, Ms. Lee indicated that Premera and other insurers cannot increase premiums for

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[9] See PwC report titled "Economic Impact Analysis of the Proposed Conversion of Premera Blue Cross for the State of Washington," dated October 27, 2003. The economic model is described in Chapter 9 of that report.

[10] See Deposition of Edward A. Gold, November 26, 2003, pp. 249-251.

either the "small group regulated" or individual lines of business in one part of the state without decreasing them in another part of the state due to the revenue neutrality regulations for setting the statewide base rates. Dr. Gold testified in his deposition that this regulatory constraint has not been built into the PwC economic model, yet that model indicates that Premera will achieve its target operating margins by raising individual premiums and regulated small group premiums by 9.3 percent and 3.6 percent, respectively. However, Dr. Gold makes no offsetting reduction in Western Washington premiums to maintain "revenue neutrality."

Q. Did you identify any other inconsistencies with respect to the PwC pre-filed direct testimony?

A. Yes. Table 9-2 of the PwC economic impact report and the technical appendix to the report illustrate another inconsistency.[11] In particular, these materials indicate that PwC believes that Premera has the ability to increase premiums in the "small group unregulated" line of business as well as the individual and "small group regulated" lines of business. However, the so-called "small group unregulated" line of business is really just a subset of what Dr. Leffler, the OIC, and everyone else in the state calls the "large group" business and, as Dr. Leffler has pointed out in his report,[12] Premera does not have the ability to increase premiums to the large groups since these groups always have the option of self-insuring. Thus, premium increases are not plausible for the "small group

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[11] The PwC technical appendix is titled "Technical Appendix: Model Quantifying the Economic Impact of Premera's Proposed Conversion." Although the appendix is dated October 27, 2003, it was not produced until a later date.

[12] See Report of Keith Leffler, Ph.D., p. 4. Note that the technical appendix also indicates that PwC believes that Premera has the ability to increase premiums in the large group business in certain counties. The definition that PwC is using for large groups excludes the so-called "unregulated small groups."

unregulated" category, despite PwC's model's prediction that such rates would have to increase if Premera is to reach its so-called target margins. This made-up category is further revealed by the fact that Dr. Gold used Dr. Leffler's share estimates for "large group" as the PwC *plugged in* estimate for "small group unregulated."

Q. Do you have any further criticisms of the PwC economic model?

A. Yes. The PwC model is used as a type of sensitivity test. It asks, "If Premera were to set its premiums and reimbursements so as to achieve a target margin, how high would those premiums get and how low would reimbursements have to be in order to achieve the target margin?" Not surprisingly, the model concludes that premiums would have to rise significantly and reimbursements would have to fall for Premera to achieve its target margins. However, whether Premera can raise premiums or lower reimbursements is never addressed; it is simply assumed. In our view, Premera has not been able to achieve higher margins because of competitive constraints. So the model is not based on an analysis of realistic competitive conditions; it is based on assumptions, including an assumption that areas in which Premera has high shares will be the places to suffer premium increases and reimbursement reductions. Yet, there is no analytical support for this assumption.

Thus, the PwC model is not useful as a predictor of what will happen post-conversion because it lacks analytical foundation. *First*, market share does not equal market power. One cannot simply infer market power even when share is 70 percent or higher. (Moreover, we do not agree with the high share measures adopted by PwC.) *Second*, as explained above, the model does not account for the regulatory constraints on raising premiums that have been imposed by state law. For example, Premera cannot

raise small groups rates even in the absence of competition. So, PwC cannot properly assume that such premiums can be increased, but they do. *Third*, the model is built on multi-county aggregations of claims and premium data that are inconsistent with the alleged relevant geographic markets PwC claims (i.e., the county level), demonstrating that such markets are too small for antitrust purposes. *Fourth*, PwC assumes a very low price elasticity with respect to how consumers will respond to premium increases. This means that PwC is assuming that Premera will lose relatively few members to rival insurers if it raises premiums after the conversion. However, the elasticity estimate that PwC relies upon is not a proper measure of how buyers in total would likely respond to a premium increase by a specific firm. PwC uses an elasticity estimate found in the health economics literature. But the elasticity measures that the PwC model incorporates are only appropriate for estimating *employee* responses to increases in HMO versus PPO premiums or to increases among premiums for specific plans. The appropriate measure to use here would be for *employer plus employee* responses to premium increases by a *single firm*. The result is that the PwC model estimates that most members will stay with Premera even if premiums are raised. A more realistic measure of elasticity would show that Premera would lose substantial membership to rival insurers and, thus, never be able to achieve its supposed target margins. Thus, the PwC model has no predictive usefulness. It cannot be used to argue that premiums will rise and reimbursements will fall as a result of the conversion.[13]

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[13] PwC does not predict that Premera can achieve its supposed target margins. PwC only presents estimates of how high premiums would have to rise and reimbursements would have to fall in order to get to those supposed target margins. The analysis is useless because the model is flawed and ignores the central issue in the antitrust analysis: will Premera raise premiums and lower reimbursements as a result of the conversion?

Mr. Katz makes a similar mistake by using an incorrect elasticity measure to estimate what might happen to the number of uninsured as a result of the assumed increase in Premera's premiums. His elasticity measure is incorrect since it is based on an increase in the premium level for the "overall market" and *not* just an increase in the premium level for a "single insurer."[14] Thus, it is appropriate only if the assumed increase is for the market as a whole. More importantly, if the assumed increase is for a single insurer only and there are other insurers in the market, the overall demand for insurance would likely remain unchanged since the members of the insurer in question could readily shift over to the other insurers whose relative premiums have remained unchanged. This is presumably why Mr. Katz acknowledged in his deposition that his estimate of the number of uninsured would change if the elasticity were reflective of an entire market and *not* just a single firm, as he assumed.[15]

C. Antitrust Testimony

Q. Did you identify any inconsistencies with respect to the antitrust testimony?

A. Yes. A final logical inconsistency that occurs in the pre-filed direct testimony of both Dr. Leffler and the PwC consultants is that, on the one hand, they both assume that Premera is acting like a not-for-profit insurer in the sale of health insurance by not exercising its market power in Eastern Washington by charging supracompetitive premiums, while on the other hand, they both assume that Premera is acting like a for-profit insurer in the buying of provider services by exercising its market power in Eastern

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[14] See, e.g., M. Marquis and S. Long, "Worker Demand for Health Insurance in the Non-Group Market," *Journal of Health Economics* 14 (1995), pp. 47-63. This is one of the underlying articles cited in the survey article that Mr. Katz references in his supplemental report.

[15] Deposition of Aaron Katz, April 8, 2004, p. 66.

Washington by paying lower reimbursements. These assumptions are logically inconsistent. If Premera really had market power, I would expect to find it exercising that market power in all of the markets in which it competes. In particular, I would not expect to find it exercising that market power on the buying side but not on the selling side. This finding indicates that one or more of the underlying assumptions are wrong.

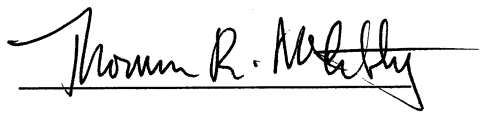
Q. Does this conclude your responsive testimony?

A. Yes.

Verification

I, THOMAS R. MCCARTHY, declare under penalty of perjury of the laws of the State of Washington that the foregoing answers are true and correct.

Dated this 14th day of April, 2004, at Los Angeles, California.



THOMAS R. MCCARTHY

The Effect of HMO Conversions to For-Profit Status

FINAL REPORT
FEBRUARY 4, 2003

Roger Feldman, PhD [1]
Douglas Wholey, PhD
Robert Town, PhD

I. Introduction

A. Topics Addressed by This Report

The Maryland Insurance Administration requested an analysis of the proposed conversion of CareFirst, Inc. from not-for-profit to for-profit status, and its acquisition by WellPoint Health Networks, Inc. The analysts were instructed to answer a fundamental question: whether the proposed transaction has a likelihood of creating a significant adverse impact on the availability or accessibility of health care services in Maryland. In order to answer this question, several independent contractors including Roger Feldman, Douglas Wholey, and Robert Town of the University of Minnesota were retained. The University of Minnesota group addressed five topics within the overall scope of work. Each of these topics dealt with a specific impact of the conversion/acquisition:

i. The impact on health insurance premiums, including those in the small group market.

ii. The impact on losses and gains to the plans, and other relevant financial measures.

iii. The impact on provider compensation and prompt payment of provider claims.

iv. The impact on quality of care delivered to subscribers.

v. The impact on availability or accessibility of care.

This report presents our data, methods, and findings related to the five topics.

B. Summary of Findings

HMO conversions to for-profit status may affect HMO enrollees, medical providers, stockholders, and the public at large. There is a substantial amount of debate and uncertainty over the effects of HMO conversions. This report sheds some light on those effects.

We analyzed three different data sets, each of which is especially suited to address one or more topics in the scope of work. The first data set consisted of annual observations on all HMOs that operated in the United States from 1986 through 2001, including 61 that converted

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[1] The authors are affiliated with the Division of Health Services Research and Policy in the School of Public Health at the University of Minnesota. Feldman is the Blue Cross Professor of Health Insurance, Wholey is a Professor, and Town is an Assistant Professor.

to for-profit status during that period. We compared several measures of performance (premiums, claims payable, provider payments, members' use of services, administrative costs, and profitability) among HMOs that converted to for-profit status with the performance of HMOs that did not convert. Although health insurance markets are hugely complex, we were able to discover several patterns of behavior that appeared regularly among the converting HMOs. The results do not provide unequivocal evidence that HMO conversions are either beneficial or detrimental to the public interest. Among our findings are the following:

- HMOs reduce their premiums by a small but significant and permanent amount when they convert to for-profit ownership.

- There is some evidence that for-profit HMOs take longer to pay providers than not-for-profit HMOs, but the effect is small. A larger one-time delay in provider payments occurs one year before the conversion, which suggests that HMOs in financial trouble may delay paying providers and subsequently convert to for-profit ownership.

- The only significant difference in provider payments is a one-time increase of about 14% in hospital per diem payment two years before a conversion.

- Enrollees in for-profit HMOs use significantly fewer hospital days than do enrollees in not-for-profit HMOs.

- Size and experience, rather than ownership status, determine whether an HMO is profitable.

- For-profit HMOs devote more resources to administration than not-for-profit HMOs. However, being less than two years old has a larger effect than ownership status on the use of administrative resources.

- Blue Cross of California does not appear to earn exceptionally high profits, although its actual premiums were higher than expected from 1996 through 2000.

The second data set comprised observations from 1994 through 1997 from the Health Insurance Plan of California (HIPC). This is the oldest and largest state-run health insurance purchasing alliance for small firms with 3-50 employees. The advantage of this data set is that it allows us to control for benefits and features of coverage such as family size, age, and region of the state, that may be related to premiums. Controlling for these features, we found that WellPoint's Blue Cross of California plan was a typical competitor – its premium was neither the highest nor the lowest among the large insurance carriers in the HIPC. We also found that the average plan's premium fell from 1995 to 1996, but rose from 1996 to 1997. WellPoint's premium fell by more than the average premium from 1995 to 1996 but rose by more than the average from 1996 to 1997. However, neither of these changes was strikingly different from the trend in the average HIPC premium.

The third data set consisted of all HMOs that participated in the Federal Employees Health Benefits Program (FEHBP) from 1997 through 2001. Serving federal employees, dependents and retirees, the FEHBP is the largest employment-based health insurance program in the United States. These data let us analyze the effect for-profit status and, to a

lesser extent, conversions, on measures of perceived health plan quality. We can also determine the effect of ownership and conversions on the generosity of plan benefits. Findings from this analysis indicate that for-profit HMOs have slightly poorer quality than not-for-profits. For-profit HMOs also require higher cost sharing for brand-name prescription drugs. This difference amounts to $2.28 per prescription or $16.42 per year, using an estimate of annual per capita prescription drug utilization from a national study.

II. National HMO Data Analysis

A. Data Sources

HMOs are the unit of analysis for this analysis. We collected four types of data for all HMOs that operated in the United States between 1986 and 2001: HMO financial and utilization data, non-financial HMO characteristics, characteristics of the market areas where the HMOs operated, and state wage data. The data have been described in several peer-reviewed research studies (Wholey, Feldman, and Christianson, 1995; Wholey, et al., 1996, 1997; Feldman, Wholey, and Christianson, 1996, 1998; Feldman and Wholey, 2001) and an unpublished paper by Connor, et al. (2003).

The financial and utilization data came from annual reports filed with state regulators and from surveys by InterStudy, a Minneapolis-based HMO think tank. We obtained these annual reports and surveys and linked them together. The methods used to link the data have changed over the years. These issues and others related to data quality are discussed in detail in an Appendix to this report.

Non-financial HMO characteristics (including location, founding year, model type, not-for-profit status, federal qualification, national affiliation, counties where the HMO operates, and enrollment) came from InterStudy. County-level market measures came from the Area Resource File (ARF) compiled by the Bureau of Health Professions of the U.S. Department of Health and Human Services. State-level wage data came from the Bureau of Labor Statistics of the U.S. Department of Labor.

Market measures were calculated using Hospital Service Areas (HSAs) developed by Makuc, et al. (1991). They grouped all counties in the contiguous United States into approximately 800 HSAs using a clustering algorithm that minimized border crossing for hospital admissions. The resulting HSAs represent self-contained hospital market areas. Makuc's algorithm is better than using geopolitical units like Metropolitan Statistical Areas (MSAs) or counties as health care market areas because unlike MSAs and counties, HSAs take into account the patterns by which individuals consume health care. HSA-level market measures were constructed as weighted averages of county-level measures for all the counties in the HSA, with the weights being the proportions of total HMO enrollment in the HSA that are found in each county. The county-level data were aggregated into HSAs using a crosswalk between counties and HSAs.

Because many HMOs operate in multiple HSAs, the next task was to aggregate the market measures across all HSAs where each HMO operated. Market characteristics at the HMO level were constructed as weighted averages of market characteristics at the HSA level. The weights were the proportions of the HMOs' enrollment in each HSA where they operated.

Once the market-area data were aggregated to the HMO level, they were linked to the organizational and financial information, thus creating a record that contained data on the HMO and its market environment for each HMO in each year it operated.

B. Defining HMO Conversions

InterStudy has been the reliable industry source of organizational information on HMOs for more than two decades. Each year, InterStudy collects data on all operational HMOs in the United States. Analysts from InterStudy call the HMOs to resolve discrepancies and inconsistencies in reporting. While InterStudy does not record conversions to for-profit status *per se*, its data can be used for that purpose. We define an HMO as converting to for-profit status in the year its InterStudy ownership designation switches from not-for-profit to for-profit. For example, an HMO that was not-for-profit in 1990 and for-profit in 1991 is defined as converting in 1991. In all other years, the HMO is defined as not converting. In our statistical analyses, we created an "indicator variable" to represent this definition. An indicator variable takes the value of "1" when a specific condition is met and zero in all other cases. The conversion indicator was set to 1 in the year when the conversion occurred and zero in all other years. The indicator was always set at zero for HMOs that never converted. Because the indicator is "turned on" only once, at most, we say that it captures the "one-time" effect of conversions. For example, in the year an HMO converts to for-profit status, does its profit take a one-time jump?

It may be the case that HMOs start to act like for-profit firms several years before they convert, but on the other hand the effects of conversion may not appear until several years later. To capture these "transitory" effects of impending and recently-completed conversions, we created four indicator variables that respectively took values of 1 two years prior to conversion, one year prior to conversion, one year afterward, and two years afterward. In all other years these indicators were set to zero.

In all years, all HMOs (even the ones that converted) are coded as either not-for-profit or for-profit. So, for instance, the HMO in our example is coded as not-for-profit through1990; thereafter it is coded as for-profit. Because the HMO carries this code with it every year, it represents the permanent effect of ownership status. Consequently, in our analyses, we were able to measure both the transitory and permanent effects of HMO conversions to for-profit status.

The first year that InterStudy reported reliable HMO ownership data was 1986, so the first year of conversions is 1987. This information is matched with other organizational and market-area data for 1987. The most recent data are for 2001. Therefore, our complete data set covers 15 years, from 1987 through 2001.

We over-rode the InterStudy ownership data in two unusual cases:

- Some HMOs changed from not-for-profit to for-profit ownership after only one year of existence. This may reflect unresolved legal issues or it may be an indication of genuine uncertainty on the part of the HMO over its true status. If the HMO consistently reported itself as "for-profit" after the first year, we coded it as for-profit in the first year, and vice-versa for HMOs that reported themselves consistently as "not-for-profit" after the first year.

- Some for-profit HMOs reported a change to not-for-profit for only one or two years and then returned to for-profit status. If all other key data (HMO name, affiliation, etc.) were unchanged, we coded the HMO as for-profit in all years, and vice-versa for anomalous cases where not-for-profit HMOs changed their ownership status without apparent reason for one or two years.

After making these changes, we identified 61 HMOs that converted to for-profit status over the period from 1987 to 2001. These HMOs became our "conversion" group, while all other HMOs served as a non-conversion control group.[2] Table 1 shows that the number of conversions per year was highest in 1987, at 18, and second highest in 1988, when 9 HMOs converted to for-profit status. One explanation for the rash of conversions in the late 1980s is that federal subsidies for not-for-profit HMOs under the HMO Act of 1973 ended in the early 1980s (Goddeeris and Weisbrod, 1998). After 1988, the number of conversions has been lower, about two or three per year on average.

To place the number of conversions in perspective, Table 1 shows the total number of HMOs by year. In relation to the number of operating HMOs, conversions were fairly rare, especially toward the latter part of the study period. The number of HMOs in the InterStudy data typically was between 500 and 600, but it appears to follow a cycle with a high point in 1988, a low in 1993, and another high in 1996. Since that last high point, the industry has been undergoing a "shakeout" with some HMOs exiting by merger or failure. By 2001, the population of HMOs had decreased to 447.

Table 1 also shows the number and percent of for-profit HMOs by year. For-profit HMOs have been more numerous than not-for-profits since the beginning of our study period. The number of for-profit HMOs appears to follow a cycle, but the percentage of for-profits has risen over time.[3] Currently, about 73% of all HMOs are for-profit.

C. Premium Analysis

Our first analysis on the national data set estimated the effect of HMO conversions on commercial premiums per member per month. The theory behind this analysis has been presented in a series of peer reviewed research studies by Douglas Wholey, Roger Feldman, and Jon Christianson (Wholey, Feldman, and Christianson, 1995; Feldman, Wholey, and Christianson, 1996, 1998). The fundamental idea behind these studies is that HMO premiums can be expressed as the product of the marginal cost per enrollee (MC), times the markup of premiums over costs:

$$(1) \qquad PREMIUM = MC * MARKUP$$

If we take the natural logarithm of both sides, the premium equation can be written as:

$$(2) \qquad \ln PREMIUM = \ln MC + \ln MARKUP$$

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[2] Twelve HMOs converted *from* for-profit *to* not-for-profit status and seven actually converted back and forth. After confirming that the data were accurate, we coded those HMOs with their actual ownership status in each year, but we did not include them in the conversion group. Because they seemed so unusual, we put them into the control group of non-conversion HMOs.

[3] This trend may have reversed recently, but it is too early to tell.

Equation (2) suggests that the relevant explanatory variables that affect premiums can be divided into two groups: those that affect marginal cost, and those that affect the markup.

Marginal costs are measured by an extensive list of variables (see Table 3 for variable definitions), including selection advantages, market input prices, and utilization of services by HMO enrollees. Selection advantages are measured by HMO penetration, defined as the percentage of the market area population enrolled in HMOs. We hypothesize that HMOs will have the greatest selection advantages when market penetration is low, because they can attract low-risk enrollees who are willing to accept the HMO's controls on medical utilization in return for lower premiums. As market penetration rises, HMO enrollees will more closely resemble the average level of risk in the community, and therefore HMO premiums should increase as a function of market penetration.

Input prices are measured by the prices of a physician visit and a hospital day at the market level. We hypothesize that these variables are positively related to HMO marginal costs and therefore to premiums. Medical resource utilization by HMO enrollees is measured by hospital days per 1,000 members. Higher hospital utilization, like higher prices, should be positively related to HMO marginal costs. To control for case-mix differences, i.e., more intensive use of services by patients in the hospital, we include variables for the proportion of Medicare and Medicaid enrollees.[4] We also include an indicator variable for cases where the hospital utilization data are missing.

HMO characteristics related to marginal costs are age less than two years, national affiliation, Blue Cross affiliation, federal qualification, whether the HMO offers an open-ended product, and the HMO's model type. Research suggests that HMOs organized around medical group practices and those organized around independent physicians (IPAs) use fundamentally different technologies (Wholey, Christianson, and Sanchez, 1993). To control for these differences, we include indicator variables in the premium equation for group, IPA, network, and mixed model HMOs, compared with the omitted category of staff model HMOs.

Variables related to the markup are income per capita in the community, the number of HMOs, and community medical resource utilization, measured by hospital days per 1,000 population. First, we hypothesize that demand for all health insurance products is less elastic in high-income areas, and therefore the premium per member per month should be higher in such areas. Next, the number of HMOs is a measure of market competition – more HMOs generally mean that markets are more competitive and premiums should be lower. Competition also should be greater in markets with higher HMO penetration, but this is only a necessary condition for competition. Market penetration matters only when competitors are present. Therefore, we created an interaction between market penetration and the number of HMOs. We hypothesize that this interaction has a negative effect on HMO premiums.

Community hospital days per 1,000 population might be viewed as influencing HMO marginal costs because as utilization increases, cost increases. However, Wholey, Feldman, and Christianson (1995) argued that it is more appropriate to view community hospital utilization as a measure of resource-intensive medical practice style in the community. Consumers

[4] Wholey, et al. (1996) and Given (1996) have found evidence of "diseconomies of scope" among HMO products. This means it is more expensive to offer multiple products (e.g., Medicare and commercial enrollees) in the same HMO compared with separate HMOs that specialize in one product. Because diseconomies of scope raise the HMO's marginal costs, they are another reason for expecting higher premiums in HMOs that offer Medicare and/or Medicaid as well as commercial enrollment.

generally do not want HMOs to restrict their use of hospitals, and in communities with higher hospital utilization, consumer resistance should be greater, which should constrain HMOs from raising premiums.

Several variables in the model may be related to both marginal costs and the markup. The most important of these is the HMO's ownership status. A common argument concerning the effect of for-profit ownership on costs focuses on incentives that lead managers of for-profit firms to place greater emphasis on efficiency. It is also argued that for-profit firms have better access to capital markets. However, for-profit firms might hold costs down by "cherry picking," that is, by designing products that appeal to low-risk enrollees.

Instead of assuming that ownership primarily affects costs, some authors (Hansman, 1987) have suggested that consumers view not-for-profit firms as more trustworthy, particularly in health care. If consumers feel this way, they might be willing to pay more for not-for-profit HMOs, on the understanding that the HMO will not try to skimp on needed services if they become ill.

In our past work (Wholey, Feldman, and Christianson, 1995), we found that for-profit HMOs charge lower premiums than not-for-profit HMOs. The difference is about 3.5%. Lower premiums are driven by lower costs for group-model HMOs, with for-profit groups having 9% lower costs than not-for-profit groups (Wholey, Feldman, Christianson, and Engberg, 1996), but ownership status is not related to costs for IPAs. Unfortunately, our past work did not identify whether for-profit group HMOs derived their cost advantages from superior efficiency or cherry picking.

As well as *being* for-profit, the act of converting to for-profit status might affect HMO premiums. Several arguments are possible. For example, HMOs may begin to behave like for-profit firms before they convert, so that the act of conversion itself represents a seamless transition to the new products, pricing strategies, and underwriting practices of the for-profit firm. To control for these transitory effects of impending conversions, we included the indicator variables that identify converting HMOs one and two years before they convert, as described previously. We also included the indicators for one and two years after the conversion, to capture transitory changes in profit that may take some time to appear.

A variety of methodological and data quality issues arise in estimating the premium model. First, each HMO appears in the data from one to 15 times. This means that the errors in the premium equation for the same HMO may not be independent. The correlation could be due to omitted characteristics of the HMO that are relatively constant over time, e.g., some HMOs may be more efficient than others, for reasons that are not apparent from the data. We used a random-effects estimator to fix the non-independence of errors. This method allows the errors to be correlated within an HMO, but independent across HMOs.[5]

Second, there are data quality problems. Premiums per member month are measured by dividing annual premium revenue by member months of coverage. The presence of unusually large revenue or small enrollment data could result in extremely large premium values, and vice versa. We eliminated 70 cases where premiums were less than $10 or greater

[5] We also estimated the models with a fixed effect for each HMO. The results were similar to the random-effects approach.

than $300 per member month. The use of logarithms to measure premiums reduces any skewness that remains in the data.

Another data quality problem resulted from missing or questionable financial data.[6] Matching financial data were missing for about 30% of the HMOs. We removed observations with obvious reporting errors such as negative medical expenses, and we combined cases where multiple HMOs under the same ownership in the same state reported data at the state level. In general, the quality of the data improved over time. Systematic temporal effects in data quality were removed by including indicator variables in the model for each year, relative to 2001.

Finally, omitted variables related to HMO quality could pose a problem for interpreting the results. Data on benefit quality – such as coverage of specific services, point-of-purchase cost sharing, and the size of the HMO's physician network – were not available. Another missing variable that could affect premiums was the average size of employer groups with which the HMO contracts (larger groups usually get lower premiums due to bargaining power or economies of scale). We can control for these factors to some extent by including the HMO model type in the premium equation. Staff-model HMOs typically have lower point-of-purchase cost sharing, whereas independent practice associations have broader networks. Offering an open-ended product is another measure of benefit quality that may be related to premiums. Systematic changes in benefits over time are captured by the indicator variables for year, and unobserved differences in benefits among HMOs are removed by the random-effects estimation method.

We estimated the model of HMO premiums described above. The results are shown in Table 4. The primary finding is that for-profit HMO premiums for commercial enrollees are about 4.4% lower than not-for-profit HMO premiums (point estimate = -0.044, probability = 0.014). This finding is consistent with our past research on ownership and HMO premiums (Wholey, Feldman, and Christianson, 1995). None of the transient conversion effects was statistically significant. Also consistent with our past research, we find that the number of HMOs has a negative and statistically significant effect on premiums.[7] An HMO with 10 competitors will charge 4.2% less than one with no competitors.

As one might expect, there is a strong tendency of HMO premiums to increase over time, although in the mid-1990s there were several years of falling premiums. Affiliation with a national firm or Blue Cross does not affect premiums. The only significant HMO model-type

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[6] Cases were deleted if any of the following was found: premium per member month less than $10 or greater than $300; price per hospital day less than $100 or greater than $3,000; price per ambulatory visit less than $10 or more than $500; physician visits per member per year less than 1 or greater than 19; hospital days per 1,000 member years less than 50 or greater than 1,500; months in claims payable less than 0 or greater than 12; or profit margin less than -500% or greater than 100%. Table 2 shows the number of cases lost or rejected for each reason. See Feldman and Wholey (2001) for an extended discussion of data quality issues in the national HMO data.

[7] An independent analysis conducted by Gray and colleagues (2001) found similar results regarding the effect of the number of competing HMOs on premiums in the Federal Employees Health Benefits Program. Gray states (page 26): "Overall our results support Wholey et al's (1995) study with the exception that we found a much stronger relation between competition and premiums than was reported in their study."

coefficient was for the network plans, which had premiums about 5.4% lower than the reference category of staff model HMOs.

The results provide strong support for the hypothesis that HMO services are more costly to produce in market areas where physician and hospital prices are higher. The number of hospital days per 1,000 members is positively related to premiums, which also indicates that HMO services are more costly to produce when hospital utilization rates are high. However, community hospital utilization was not related to HMO premiums.

Taken together, these findings suggest that HMOs reduce their premiums immediately by a small but statistically significant amount when they convert to for-profit ownership and from that point onward, they resemble HMOs that have always been for-profit.

Our finding that competition reduces premiums strongly supports the view that public agencies should carefully review mergers that reduce the number of competing HMOs. Because of the importance of this finding, we also tested it using a different measure of competition called the Herfindahl-Hirschman Index or HHI. This measure is calculated as the sum of squared market shares of the competing HMOs. It gives weight to the relative size, as well as the number of competitors, and is used by antitrust agencies to determine if particular mergers raise the possibility of significant anti-competitive effects (U.S. Department of Justice, 1997). In this supplementary analysis, the number of competing HMOs was replaced by the HHI. We found that higher HHI (i.e., a more concentrated market with less competition) was associated with higher premiums. At the mean market penetration of 19.5%, premiums would increase by approximately 13% if the market changed from being perfectly competitive to having only one HMO.[8]

D. Claims Payable Analysis

The next analysis on the national data set estimated the effect of conversions on the length of time it takes the HMO to pay medical providers. "Claims payable" represents the value of services provided to HMO enrollees for whom the HMO has not yet paid providers such as physicians and hospitals. Managing claims payable is essential for HMO solvency and risk management. Most aspects of HMO operations cannot be changed quickly in response to unexpected conditions, such as higher-than-expected medical utilization. HMOs have more short-term flexibility to change how quickly or slowly they pay providers. This flexibility helps HMOs reduce their operating risk.

However, claims payable cannot be increased indefinitely without arousing the ire of state insurance regulators, employers, providers, and consumers. Delaying payments to providers creates the risk of alienating providers, who may respond by refusing to contract with the HMO or by reducing the quality of services. If these provider responses are widespread, consumers may notice that access to and quality of services are lower when the HMO delays paying its providers.

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[8] A perfectly competitive market has an HHI of zero and one that has only one firm has a HHI of 1.0. Another example would be a market with four equal-sized firms. If any two of them merge, the HHI would increase from 0.250 to 0.375. We predict that premiums would increase by 1.6% as a result of this hypothetical merger.

In addition to unexpected business conditions, a variety of other market and organizational factors may influence the length of time it takes HMOs to pay claims. For example:

- Group and staff model HMOs concentrate their patients at particular hospitals and thus are more dependent on the medical staff of those hospitals. This gives the doctors more bargaining power and may lead to faster payment of claims.

- For a variety of reasons, including closer relations with providers and less complex billing systems, locally owned HMOs may pay claims faster than HMOs that are owned by national firms.

- Because paying claims later translates into greater cash flow, for-profit HMOs may try to delay paying claims until providers begin to revolt.

To our knowledge, only one study has estimated the effects of these different influences on HMO claims payable. Using data on all HMOs that operated in the United States between 1985 and 2001, Connor, et al. (2003) found that locally owned HMOs paid claims 0.201 months more quickly than nationally owned HMOs. Group and staff-model HMOs paid claims 0.630 months and 0.408 months more quickly than IPAs. However, for-profit ownership had no effect on the number of months in claims payable. This report extends Connor's analysis by estimating the effect of conversion to for-profit ownership on claims payable.

The data for this analysis have been described above. "Claims Payable" is the average number of months between the provision of and payment for a medical service. This variable was calculated by dividing the balance sheet amount for year-end claims payable by average claims per month from the HMO's income and expense statement.[9] This measure is useful for comparing claims payable among HMOs of different sizes and was used as the dependent variable for the analysis. Claims payable includes both incurred but not reported (IBNR) claims and reported claims.

HMO characteristics that may affect months in claims payable are HMO model type, for-profit status, age, payer mix, the HMO's bargaining power over providers, and its profit margin. Group and staff-model HMOs concentrate their patients at particular hospitals and thus are more dependent on the physicians at those hospitals. We expect that greater dependence is associated with faster payment of claims. In addition, some staff-model HMOs employ salaried physicians. The "payment lag" for these salaried physicians should be no longer than their monthly or bimonthly pay periods. We included indicator variables in the model for group, staff, network, and mixed-model HMOs relative to the omitted category of IPAs.

HMOs younger than two years generally have different operating characteristics than older HMOs, so we included an indicator variable in the model for HMOs less than two years old compared with HMOs two years and older. Smaller HMOs generally are less accurate in estimating IBNR (Aiuppa and Trieschman, 1987), so we also included the natural logarithm of the HMO's enrollment.

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[9] The calculation is: amount in claims payable on balance sheet divided by one-twelfth the sum of physician expenses, other provider expenses, emergency room and outside area expenses, referral expenses, and inpatient expenses.

We used several variables as instruments (proxy variables) that stand in for HMO bargaining power over providers and profit margin.[10] HMO market penetration as a proportion of total service area population was the primary instrument for bargaining power over providers – a higher penetration rate is expected to increase the HMO's power. The number of HMOs and the interaction of number times penetration were also included in the equation as proxy variables for HMO bargaining power. The primary instrument for profitability was the natural logarithm of the HMO's total enrollment.

Wage rates from the Bureau of Labor Statistics occupational wage surveys and average charges for a physician office visit and a hospital day were included in the model to control for market characteristics that might be related to input prices. Other variables included indicators for each year relative to 2001, per capita income, and community hospital days per 1,000 population.

We regressed months in claims payable on HMO and market characteristics, including HMO ownership status and conversions. The results are shown in Table 5. We find some evidence that for-profit HMOs pay claims more slowly than not-for-profit HMOs. However, the effect is small (0.11 months) and the estimated coefficient is just outside the 10% statistical confidence level. A larger (0.51 months) and statistically significant one-time delay occurs one year before the conversion.[11] This finding suggests that HMOs in financial trouble may delay paying providers and subsequently convert to for-profit ownership. Further evidence on the association between profitability and for-profit ownership is deferred to a later analysis.

As we expected, HMOs less than two years old paid claims more slowly than older HMOs, by 0.459 months. Blue Cross affiliation and national affiliation also were associated with slower claims payment, by 0.212 months and 0.200 months, respectively. IPA and mixed-model HMOs paid claims more slowly than staff-model HMOs. Offering an open-ended product is associated with slower claims payment, possibly because the HMO reviews out-of-network claims in these products more extensively before paying them.

The proxy variables for HMO bargaining power and profitability had the effects we expected. Higher market penetration and more HMOs (more buying power) were associated with slower payment, and higher enrollment (greater profitability) was associated with faster payment. However, when the market is highly penetrated, adding another HMO has a smaller effect on claims payment.[12]

These findings suggest that HMOs use claims payable to manage an uncertain business environment. For-profit status is associated with a slight delay in paying claims, as is an

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[10] Instruments are used instead of actual bargaining power and profit margin because they are less likely to be "endogenous" (correlated with the error term in the premium equation). The estimated effects would be biased if endogenous variables were included the equation.

[11] On average, and not controlling for any other variables, HMOs took 2.43 months to pay claims one year prior to a conversion, whereas HMOs that did not convert took 2.27 months to pay. We also found that HMOs delayed provider payments by 2.51 months three years before conversion, but we did not include this effect in our models because it is based on only 19 observations.

[12] Using the estimated coefficients from Table 5, we find that the effect of adding another HMO would become negative if penetration were greater than 21%. That is: Δ Claims Payable / Δ Number of HMOs = 0.040 – 0.186 Penetration < 0 if Penetration > .215.

impending conversion. However, it may be the case that conversions and claims payable are both driven by other factors related to HMO profitability.

E. Provider Payments

Our third analysis on the national data set estimated the effect of conversions to for-profit status on the level of HMO payments to physicians and hospitals. The theoretical framework this analysis is taken from a study by Mark Pauly (1998, page 1439), who observed, "All forms of managed care share a common technique for achieving lower costs than their indemnity insurance competitors: they pay lower prices or revenues to healthcare providers." This feature of managed care is almost universally believed to be socially desirable because it is thought to represent the breakup of monopoly power formerly held by providers. However, Pauly (1998) noted that paying lower prices to providers is consistent with another theory that suggests this outcome is undesirable. The alternative theory is that large managed care buyers exercise *monopsony* power over providers. This means that individual managed care organizations purchase such a large share of the providers' services in the local market that they can drive input prices below the competitive level.

It is not possible by observing only input prices to determine whether large buyers obtain lower prices by "beating back" monopoly power or by driving prices below the competitive level. Both theories predict that buying power is associated with lower prices. However, Pauly (1998) proposed a definitive test of the monopsony hypothesis that relies on observing the supply of inputs in addition to their prices. If lower input prices represent the exercise of monopsony power, the quantity of inputs supplied under conditions of increasing long run marginal cost should decline. On the other hand, if lower prices represent the breakup of monopoly power, they should be accompanied by rising utilization of inputs.

Feldman and Wholey (2001) were the first researchers to put Pauly's proposed test of the monopsony hypothesis into practice. They estimated models for the prices paid by HMOs for ambulatory visits and inpatient hospital days. The key independent variable was a measure of the importance of an individual HMO as a buyer of ambulatory care or hospital services. Next, they estimated models for the utilization of ambulatory visits and inpatient hospital days per HMO enrollee, as a function of HMO buying power and other variables. The principal findings were that increased HMO buying power is associated with lower prices and higher utilization of hospital inpatient days per enrollee. These findings are inconsistent with the monopsony hypothesis. They suggest that managed care organizations have contributed to a welfare-increasing breakup of hospital monopoly power. Buying power was not related to ambulatory visit prices or utilization.

We estimated models for the prices that HMOs pay for an ambulatory visit and a hospital day. The results are shown in Tables 6 and 7. It appears that for-profit HMOs pay slightly less to physicians and slightly more to hospitals, although neither effect is statistically significant. The only significant transient conversion effect was a one-time increase in payments to hospitals of about 14%, found two years before the conversion.

Many of the other variables in our models offer significant and interesting evidence regarding the determinants of HMO provider payment policy. For example, HMOs less than two years old pay physicians 9.6% more than older HMOs. This may be evidence that younger HMOs are more dependent on physicians and therefore less able to negotiate discounts from physicians. HMOs affiliated with Blue Cross plans pay 5.3% more to hospitals, possibly reflecting the continuing effects of past hospital sponsorship of Blue Cross plans.

F. Members' Use of Services

According to Aday, Andersen, and Fleming (1980), patient contact and volume measures of utilization of medical services can provide information on who has access to the medical care system. Such measures are said to represent "realized" or actual access. Of course, in and of themselves they are not perfect measures of access. Other factors, such as the health status of the population, need to be considered as well. Nevertheless, an analysis of measures of realized access might reveal important differences between for-profit and not-for-profit health care delivery systems.

The most important result from this analysis is that enrollees in for-profit HMOs use 15.228 fewer hospital days per 1,000 member years than do enrollees in not-for-profit HMOs (see Table 9). None of the transient conversion effects is significant in the hospital use analysis. For-profit ownership does not appear to affect the use of ambulatory visits (see Table 8), although the transient effect one-year before a conversion is -0.547, with a probability of 0.125.

It is noteworthy that the effect of national affiliation on hospital utilization is also negative, at -18.393 days per 1,000 member years. Taken together, enrollees in national, for-profit HMOs use about 34 fewer days per 1,000 member years than do enrollees in local, not-for-profit HMOs. It is tempting to interpret this difference as an indicator of greater efficiency, but it could also represent favorable risk selection or under-provision of services in national, for-profit HMOs.

The proxy variables for HMO buying power show several interesting results. First, as in our prior work (Feldman and Wholey, 2001), we did not find that HMO buying power over physicians was related to enrollees' use of services. Second, HMO buying power over hospitals was related to greater use of hospital inpatient care – but only up to a point. According to Table 9, greater HMO penetration (one of the proxy variables for bargaining power) has a positive effect on hospital use, but the interaction of penetration and the number of HMOs has a negative effect. Although it would take a very large number of HMOs to produce a net negative effect, these results suggest that HMO buying power over hospitals could possibly lead to monopsony power where enrollees use too few hospital days.[13]

G. HMO Profit Analysis

Although it is widely believed that for-profit HMOs are more profitable than not-for-profit HMOs, the evidence shown in Table 10 indicates that this is not the case. We estimated an equation for HMO profitability, defined as (net income/revenue) x 100 and found that for-profit HMOs are slightly *less* profitable than are not-for-profit HMOs, but the difference is not statistically significant. None of the transient conversion indicators had a statistically significant effect on HMO profits. Nevertheless, it is noteworthy that the conversion indicators are all negative. HMOs that were about to convert to for-profit status had lower profits, as well as HMOs that had recently converted. These findings are consistent with the results of the claims payable analysis. They suggest that an HMO in financial difficulty may be more likely to convert than one that is not in difficulty.

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[13] For example, with HMO market penetration of .30 it would take 18 HMOs to produce a net negative effect of buying power on enrollees' use of hospital care.

The natural logarithm of enrollment has a large positive effect on profits, while the indicator for age less than two years has a large negative effect.[14] These results indicate that size and market experience, rather than ownership status, determine whether an HMO is profitable.

We also used an alternative definition of profit margin that removes investment income and other revenue from the HMO's profits. This definition corresponds to profits from the HMO's core business – selling member months of covered services to enrollees. The alternative analysis (results not shown) also finds that for-profit status has a negative but insignificant effect on profit margin (point estimate = -1.49, probability = 0.23).

H. HMO Administrative Ratio

The next analysis focuses on the HMO's *administrative ratio*, defined as the fraction of total expenses that are spent on administration, times 100. We use this measure, instead of the more popular *medical loss ratio*, (medical expenses divided by premium revenue) because we believe that it is a better indicator of the HMO's administrative cost. Unlike the medical loss ratio, it is not affected by product market conditions.[15]

The results in Table 11 show that for-profit HMOs have higher administrative ratios, by 1.57 percentage points on average, than not-for-profit HMOs. None of the transitory conversion effects was statistically significant. Younger HMOs (less than two years old) spent significantly more on administration than did older HMOs, and small HMOs spent more than did large ones. These results explain why age and size matter so much for HMO profitability – as an HMO gets older and larger, it doesn't need to spend as much on administration relative to total expenses.

I. Wellpoint's Predicted and Actual Performance

All of the analyses above represent the *expected* relations between HMO characteristics, market structure, and performance. In other words, they represent a bet that a randomly selected HMO – including WellPoint's Blue Cross (BC) of California HMO – will behave as the estimated coefficients of the models predict. However, WellPoint health plans may have special characteristics that are not included among the measured variables in our model. For example, according to interviews with informed subjects conducted by Mark Hall of Wake Forest University (Hall and Conover, 2002, page 1), "many people commented that BC of California stands out as being especially profit oriented and aggressive in its business strategies, even compared to its non-Blue competitors." Financially, WellPoint has been very successful, which the subjects interviewed by Hall attributed to its aggressive bargaining with providers over payment rates and its tough underwriting policies (Hall and Conover, 2002).

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[14] The enrollment effect is difficult to interpret because enrollment is measured in logarithms. For example, suppose that enrollment grows from 22,026 to 59,874 members. This is an increase of 1.0 logarithmic units, from 10.0 to 11.0. The HMO's profit would increase by 5.944 percentage points. The age effect is simpler: HMOs less than two years old are 18.389 percentage points less profitable than HMOs two or more years old.

[15] The medical loss ratio could be low because the product market is competitive, thereby reducing the HMO's premium revenue. The administrative ratio is not subject to this problem. See Robinson (1997) for an extended discussion of how the medical loss ratio gets used (and abused) as a measure of health plan performance.

In another area, however, WellPoint may be more lenient than its competitors. A recent market analysis by Merrill Lynch (Goodman and Urban, October 24, 2002) noted that WellPoint had reduced its days of medical expenses in claims payable. The report opined that this trend could "raise eyebrows" if it continues. That said, the Merrill Lynch analysts viewed the decline as "consistent with WellPoint's efforts to improve claims processing productivity."

To gain some insights into possible difference between BC of California's actual and predicted performance, we performed the following analyses. Using the results of the models in the previous sections, we predicted how BC of California should have performed on setting premiums, paying providers, etc. Then we calculated the difference between actual and predicted performance. This difference is called the "residual value." A positive residual value for premiums means that BC of California sets higher premiums than would be predicted on the basis of all the evidence considered in this report.

These comparisons were hindered because BC of California did not report complete financial data. The data were missing before 1993, and ambulatory prices and utilization were never reported. We used every measure in every year it was available. The results are shown in Table 12.

According to InterStudy, BC of California converted to for-profit ownership in 1994. Prior to that time and for one year afterward, the residual values for premiums were negative. However, from 1996 to 2000 (with 1997 missing), actual premiums were higher than predicted premiums. In 2001, the residual value was negative once more. Therefore, these results suggest that BC of California once was a low-priced HMO, then became high priced after its conversion, and may now be low-priced again, although the reversion to low premiums is based on data for only 2001.

BC of California paid providers more slowly than expected in 1993. From 1994 to 1996, payment was more prompt than expected. Data for 1997 were missing, but when they resumed in 1998, BC of California had become a laggard. The residual value for 2000 was approximately 0.85 months. Unfortunately, data for 2001 are missing. Our findings seem to contradict those of Merrill Lynch (Goodman and Urban, October 24, 2002), but we have controlled for variables that affect the timing of claims payable. Once those factors are accounted for, BC of California usually pays claims more slowly than we expect.

No pattern can be found in the utilization of hospital services among BC of California enrollees. 1993-1994 and 1998-1999 had positive residual values, but the residual values for other years were negative. The data on hospital prices indicate that BC of California paid less than the expected price from 1993 to 1995, but from 1996 through 2001 (with 1997 missing) it paid more than the expected price. This finding is surprising, in the light of BC of California's reputation as a tough bargainer with providers.

BC of California's actual administrative ratio was higher than the predicted ratio in every year for which we have data except 1998. In 2001, for example, the actual administrative ratio was 14.99%, compared with a predicted ratio of 11.25%. Finally, BC of California earned a positive profit in every year for which we have data, but the residual value of profit was negative in every year except 1995.

J. Limitations

Although the analysis of national HMO data is informative, it has several important limitations. First, it applies only to health maintenance organizations. While HMOs constitute a large part of the managed care industry in the United States, they are not necessarily representative of other forms of managed care such as preferred provider organizations. In addition, our report analyzes only fully insured HMO products in the commercial market.

Second, we observe the HMO's total performance in the commercial market but not how it performs in each line of business (e.g., small groups versus large groups). Likewise, we do not observe the level of benefits offered by each HMO. This limitation could mean that for-profit HMOs charge lower premiums but offer fewer benefits.

Third, we do not know how for-profit status and conversions affect HMO quality. If, for example, for-profit HMOs offer lower-quality care, this would place their lower premiums in a less favorable light.

To some extent, these limitations can be addressed by the second and third data sets we analyze – the Health insurance Plan of California (HIPC) and the Federal Employees Health Benefits Program (FEHBP).

III. The Health Insurance Plan of California

A. Summary

This section of our report assesses the projected impact of the acquisition on premiums paid by subscribers in the small group market. WellPoint's track record in setting premiums for the small group market in California may be relevant for deciding whether the acquisition of CareFirst might result in similar premium trends in Maryland, Delaware, and the District of Columbia. Therefore, we performed an analysis of premiums charged by WellPoint to the California Health Insurance Purchasing Cooperative (HIPC) from 1995 to 1997, compared with premiums charged by other carriers in the HIPC. We found that WellPoint was a typical competitor in the HIPC. An analysis of premiums in each year showed that WellPoint's premium fell by more than the average plan's premium from 1995 to 1996, but then it increased by more than the average from 1996 to 1997, controlling for other factors.

B. The HIPC

The Health Insurance Plan of California (HIPC) is the nation's first and largest state-run health insurance purchasing alliance for small firms (Yegian, et al., 2000). Created in 1993 the HIPC offers small firms the freedom to choose their own health plans from among 11-15 health maintenance organizations (HMOs) and one or two point-of-service (POS) plans, depending on the region of the state where they are located.[16]

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[16] Data on the number of plans are for 1998-1999. Yegian et al. (2000) report that the initial HIPC menu included several preferred provider organizations (PPOs), but all subsequently dropped out of the program. After the PPOs left the program, the HIPC replaced them with a POS product, which is a hybrid between an HMO and a PPO.

Employer eligibility for the HIPC is limited to firms with 3-50 employees. Employee eligibility is limited to full-time employees and a 70% minimum participation rate is required. Employers must contribute at least half of the lowest single-coverage premium (Buchmueller, 1997).

To participate in the HIPC, a carrier must offer coverage in its entire licensed service area. Each plan offers two levels of benefits: standard and preferred (preferred benefits have lower out-of-pocket costs when care is received). Premiums vary by seven age categories, four family size categories, and six regions. Because of these multiple rating categories, there are actually dozens of premiums for each carrier. Carriers are prohibited from selling the same coverage outside the HIPC for a lower premium.

C. WellPoint's HIPC Premiums

The HIPC premium data have several strengths for the analysis that we conducted (Town, 2001). The first of these is that the premiums represent the revenue earned for an additional enrollee, rather than averages or aggregates over different types of plans. Second, there is a substantial amount of price variation. And third, the program requires all products to have a standardized benefit package. Therefore, differences in premiums across carriers cannot be explained by differences in benefits offered.

WellPoint offers a plan to the HIPC under its "Blue Cross of California" HMO, which appears in our data for the years 1995, 1996, and 1997. We obtained premium data from the HIPC for those years. Our first analysis was simply a descriptive investigation of how WellPoint's premium compared with those of the other large insurance carriers in the HIPC. We found that BC of California was a typical competitor – its premium was neither the highest nor the lowest among the large plans. For example, in the Los Angeles region in 1995, BC of California charged $94.94 per month for standard coverage for a single person age 30-39. The other premiums were Kaiser $84, Aetna $89.29, PacifiCare $99.17, CIGNA $99.27, and Health Net $99.32. Although this is just one page from the premium rate book, it is representative of other regions and categories. Kaiser was generally the least expensive plan.

Next, using data from 1994-1997,[17] we estimated an equation of the form:

(3) $Ln(premium) = \exists_0 + \exists_1 Blue\ 96 + \exists_2 Blue\ 97 + \exists_3 Region + \exists_4 Year$

Ln(premium) = the natural logarithm of the HMO or POS premium[18]

Blue 96 and *Blue 97* = indicator variables for BC of California in 1997, compared with 1995 and 1996.

Region = indicators for three of the HIPC's four largest regions[19] (San Francisco is the omitted region).

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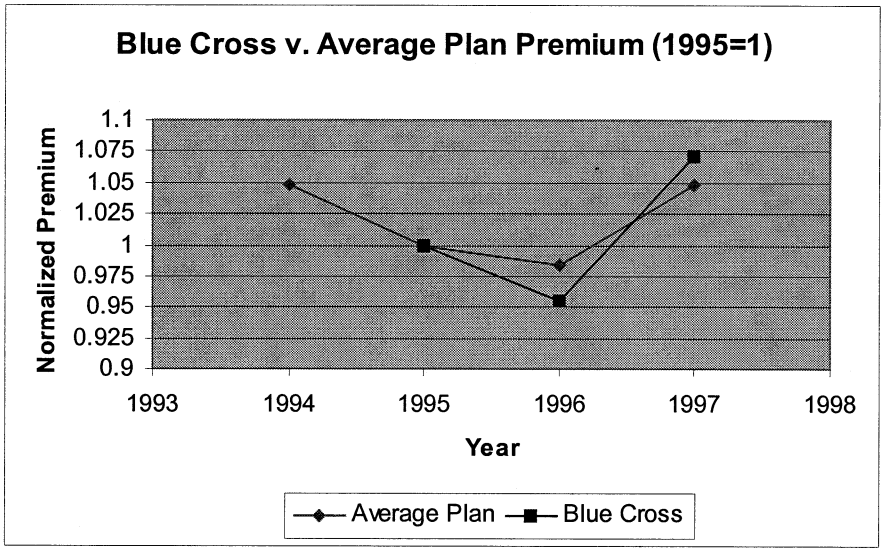
[17] The regression includes data from 1994, a year when WellPoint was not offered. These observations are included in order to obtain more precise estimates of the coefficients of other variables.

[18] The dependent variable is measured as a natural logarithm to reduce the influence of large premium values that might cause the error term in our equation to be "skewed." Skewness (a distribution that is influenced by a few large values) would make it impossible to test hypotheses about the effect of the independent variables on premiums.

The equation also controls for type of benefits (standard or preferred), coverage (employee only, employee plus spouse, employee plus children, or family), and four age categories (20-29, 30-39, 40-49, and 50-55).

The "∃" coefficients from this equation measure the association between premiums and the factors listed above. In particular, the coefficients of *Blue 96* and *Blue 97* measure the trend in BC of California's premium relative to the average plan's premium. This was a period of intense premium competition, and the average plan's premium fell from 1994 to 1995. Using 1995 as a baseline, the average plan's premium fell again in 1996, by 1.6%. The Blue Cross premium fell by 4.5%, making BC of California relatively less expensive than the average plan. Between 1996 and 1997, the average plan's premium rose, but Blue Cross's premium rose by more than the average. In 1997, Blue Cross was 7.1% more expensive than the baseline year, whereas the average plan was 4.8% more expensive. However, we caution that the differences from year to year are rather small. The pattern of premiums in the HIPC is shown in Figure 1.

Figure 1



[19] The four most populous HIPC regions are San Francisco, Orange/Santa Barbara Counties, Los Angeles County, and San Diego/Riverside Counties. Observations from the remaining two regions were removed from the analysis because they are sparsely populated and therefore do not represent the state's urban population.

IV. Federal employees Health Benefits Program

A. Summary

Conversion to for-profit status may affect many dimensions of plan performance, in addition to premiums. The Federal Employees Health Benefits Program (FEHBP) provides an opportunity to observe some of these effects. Using data from 1997-2001, we found the following results:

- Conversion to for-profit status has a significant negative effect on premiums, but this result is driven by the experience of a single plan, ConnectiCare. Otherwise, for-profit HMOs may charge slightly less than not-for-profits, but the effects are not statistically significant.

- Federal enrollees in for-profit HMOs have slightly lower opinions about the quality of their plan and lower overall satisfaction, compared with enrollees in not-for-profit HMOs.

- The only difference in benefits is that for-profit HMOs charge $2.28 more per prescription for branded drugs than do not-for-profits.

- The FEHBP premiums charged by BC of California are not significantly different than those of a peer group of other FEHBP plans in California.

- The FEHBP data suggest that lower premiums in for-profit HMOs are not a function of enrolling lower risks.

B. Background

The Federal Employees Health Benefits Program (FEHBP) is the largest employment-based health insurance program in the United States, covering approximately 4.1 million active federal employees and annuitants, as well as their 4.6 million dependents and survivors, at an annual cost to the government of $16.5 billion in 1997.[20] Participants in the FEHBP can choose among many health plans that offer varying levels of benefits and premiums. The FEHBP has many of the features recommended by advocates of "managed competition," including annual "open seasons" when employees can freely switch between plans. In preparation for the open season, the federal Office of Personnel Management (OPM), which manages the program, distributes comparative information on health plans, including the results of consumer satisfaction surveys.[21]

The OPM's consumer satisfaction survey uses an assessment tool known as the "Consumer Assessment of Health Plans Survey," or CAHPS®, which was developed by a consortium headed by the Harvard Medical School, Research Triangle Institute, and the RAND Corporation. CAHPS® provides meaningful information about the experiences of consumers in

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[20] 1997 data are from the Budget of the U.S. Government, 1999, Washington, DC: U.S. Government Printing Office, 1998, Appendix, p. 1009. See Feldman, Dowd, and Coulam (1999) for an analysis of the FEHBP as a potential model for reforming the Medicare program.

[21] U.S. Office of Personnel Management, Federal Employees Health Benefits Program, "Quality Healthcare is Important," http://www.opm.gov/insure/health/about/quality.htm, visited October 7, 2002.

health plans and is widely used by public and private employers, Medicaid agencies, and the Medicare+Choice program to help consumers and purchasers assess and select health plans.[22]

The complete CAHPS® questionnaire contains 59 items, but for ease of presentation, OPM summarizes the findings in six key areas: getting needed care, getting care quickly, how well doctors communicate, customer service, claims processing, and overall plan satisfaction. Each health plan is ranked on these six dimensions, using indicators in the style of Consumer Reports (□,⊖, and □ stand for above average, average, and below-average performance, respectively).

OPM also provides information to employees on the accreditation status of different health plans. Accreditation is a widely accepted method for measuring and evaluating health system performance. OPM uses the ratings of three accrediting agencies: the National Committee for Quality Assurance (NCQA), the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the American Accreditation Healthcare Commission/URAC (URAC).

OPM does not require that health plans offered to federal employees have standardized benefits. Because benefits are an important dimension of health plan value for consumers, OPM provides information on the following plan benefits: the co-payment for a primary care doctor's office visit, the deductible/co-payment per hospital stay, and the co-payments for generic, brand name, and non-formulary drugs.

C. Data

We obtained annual data on premiums, benefits, and plan satisfaction and accreditation scores for all HMOs that were offered by the FEHBP from 1997 to 2001.[23] The annual premiums are broken down by enrollment code (self-only or self and family enrollment). Next, we merged information regarding each plan's ownership status during each year of that period onto the plan records.

HMOs may offer high and low-option coverage to federal employees, but most of them offer only the high-option, so we restricted our analysis to high-option coverage. This restriction reduced unmeasured variability in benefits in our analysis.

In the process of collecting data, we found that the measures of benefits and quality were not reported consistently over time or for all years. Quality measures were reported from 1997 through 2000, but information on benefits was reported only for 2000 and 2001. Consequently, the models were limited to using the data that were available.

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[22] Agency for Health Care Policy and Research, "Consumer Assessment of Health Plans (CAHPS®): Fact Sheet," http://www.ahcpr/gov/qual/cahpfact.htm, visited October 19, 2001.

[23] The FEHBP also offers several nationwide fee-for-service plans that are open to all employees or to specific groups of employees (e.g., the secret service). We did not include these nationwide plans in our analysis because it is not clear how to determine their ownership status. For example, Blue Cross and Blue Shield offers two nationwide open-access plans that are administered by a combination of for-profit and not-for-profit local BSBS affiliates.

Another limitation of the data was that only a few HMOs converted to for-profit status during the study period, and of these, only three offered FEHBP products. These were Yellowstone Community Health Plan in Montana, ConnectiCare in Connecticut, and HIP HealthPlan of Florida. After presenting the results, we will discuss how they are influenced by these unique observations.

D. Analysis of FEHBP Premiums

In the first analysis, we estimated equations for HMO premiums as a function of for-profit status and conversions to for-profit status (subject to the limitations noted above). Some of the premium equations, using data for 1997-2000, include quality indicators as explanatory variables. These equations address the question of whether premiums are higher in for-profit/converting HMOs, controlling for quality differences. Other premium equations exclude quality, thereby allowing us to utilize the data for the whole 1997-2001 period.

All of the models use a random-effects estimator, which allows the errors to be correlated among observations on the same HMO. The premium equations that include quality have fixed effects for states. All equations that exclude quality use state-times-year interactions to control for unmeasured plan characteristics that may be related to plan quality. Variable definitions for our models are shown in Table 13.

Controlling for quality, we find that conversion to for-profit status has a significant one-time effect of –22% on single-coverage premiums (Table 14, Model 1). For-profit status has a small and statistically insignificant negative effect of premiums. When we exclude quality and use the data from 1997-2001, the one-time conversion effect is significant but somewhat smaller, at –20% (Table 14, Model 2). The effect of being for-profit was still small and not significant. Models 3 and 4 of Table 14 report similar effects for family coverage, that is, negative one-time conversion effects and insignificant ownership status effects.

E. FEHBP Quality Analysis

The effect of for-profit ownership on quality of care is very controversial. Himmelstein and co-authors (1999) claim that investor-owned HMOs have consistently lower quality-of-care indicators than not-for-profit HMOs. Tu and Reschovsky (2002) found few differences in enrollees' satisfaction and out-of-pocket costs between for-profit and not-for-profit HMOs. However, among sick enrollees the gap in out-of-pocket costs grew to 40% and satisfaction was 18% lower in for-profit HMOs.

We had two quality measures from the FEHBP: the enrollee's rating of "quality of care" on a 100-point scale and the percentage of enrollees who were "extremely satisfied" with their health plan. These quality measures had the most complete data from 1997 to 2000. We used these measures in a statistical comparison of quality between not-for-profit and for-profit HMOs. The analysis does not distinguish between single or family coverage because the quality surveys represent all enrollees, regardless of the type of coverage.

We found that for-profit HMOs have lower overall quality of care ratings than not-for-profit HMOs. The difference is statistically significant at 0.009 probability, but the size of the

difference is rather small, at about –0.85 points on the 100-point scale.[24] Transitory conversion effects do not affect the HMO's overall quality rating.

We also found that for-profit ownership is associated with a decrease of 0.694 points in the percentage of extremely satisfied enrollees (probability = 0.067). On average, 19% of enrollees in all FEHBP plans are extremely satisfied, so the for-profit effect represents a 3.7% decrease in enrollee satisfaction. The effect of conversion to for-profit status on enrollee satisfaction is different. Conversion is associated with a one-time increase of 7.565 points in the percentage of enrollees who are extremely satisfied with their HMO, although this result is not statistically significant.

F. FEHBP Benefit Models

Using data from 2000 and 2001, we estimated equations for plan benefits such as cost sharing and prescription drug coverage. These equations address the question of whether benefits are better or worse in for-profit HMOs.

Beginning in 2000, the FEHBP reported the plans' co-payments for inpatient and outpatient services and prescription drugs. Specifically, HMOs have different co-payments for physician office visits, inpatient hospital care, and generic and branded prescription drugs. We analyzed the benefit structures of for-profit and not-for-profit HMOs using the FEHBP data. We have included a summary of the results but not a table.

There are no significant differences between for-profit and not-for-profit plans in physician office visit and inpatient hospital co-payments. We also find no differences in the co-payments associated with generic prescription drugs.[25] The one benefit for which there is a significant difference is branded prescription drug co-payment. For-profit plans charge $2.28 more per prescription for branded drugs. This difference is significant at the 0.01 confidence level. On average, an individual will have 7.2 branded prescriptions per year (Joyce, et al., 2002). Thus, the expected increase in out-of-pocket expenditures for a federal employee who enrolls in a for-profit health plan is $16.42 per year.[26]

G. FEHBP Premiums in California

We addressed the question of whether FEHBP premiums charged by Blue Cross of California are higher or lower than we would expect, compared with a peer group of other California HMOs in the FEHBP. Using 79 observations from 1997 to 2001, we found that BC of California does not stand out. Its high-option single and family coverage premiums are no different than those of the peer group. HMOs in California as a whole were less expensive than the national average for this period.

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[24] The average quality rating is 60.8, so the for-profit effect reduces quality by 1.4%.

[25] The analysis is performed using a Tobit procedure that corrects for censoring of the dependent variable. The t-statistics for the benefits with no significant differences range from –0.42 to 0.82.

[26] In a previous study, Ahern and Molinari (2001) found that for-profit HMOs have lower prescription drug costs. Our analysis explains why: for-profit HMOs shift some of the costs to enrollees.

H. Risk Selection in the FEHBP

One perennial question regarding our analysis of for-profit versus not-for-profit HMO performance is whether the comparisons are biased by differential risk selection. For example, could the finding of lower premiums in for-profit HMOs be a reflection of enrolling more favorable risks, rather than lower mark-ups or lower costs?

To shed some light on this question, we analyzed the FEHBP premiums for 2001, the year with the best data on plans' benefits. We estimated an equation for the natural logarithm of premiums. The following independent variables were included in the equation: the primary care doctor office co-pay, the hospital co-pay/deductible per stay, the co-pays for generic drugs, branded drugs, and branded non-formulary drugs, fixed effects for states, and an indicator of for-profit HMO ownership.

Including benefit variables in the equation should remove premium differences that are due to risk selection. In particular, if high-risk employees are attracted to better benefits, then the coefficients of the benefit variables should be negative (because higher co-pays/deductibles represent "poorer" benefits). After premium differences related to risk selection are removed, the coefficient of for-profit status should represent the unbiased effect of for-profit ownership on premiums.

The results showed that none of the benefit effects was statistically significant, and the effect of for-profit ownership on premiums was zero. While this analysis applies only to one year and is based on only 201 observations, it suggests that differences in benefits among HMOs in the FEHBP are not large enough to create a problem of differential risk selection. Detailed results are available on request.

I. Qualifications

We mentioned earlier that the conversion effects are driven by the experience of three HMOs (Yellowstone Community Health Plan, ConnectiiCare, and HIP HealthPlan of Florida). Data on premiums from these three plans are shown in Table 15. Yellowstone Community Health Plan raised its single and family-coverage FEHBP premiums when it converted to for-profit status in 1999, although it was still less expensive than the average HMO. HIP also raised its premiums when it converted in 2001, but the increases were less than the average premium increase from 2000 to 2001. ConnectiCare cut its premiums substantially when it converted in 1999. Therefore, the one-time effect of conversion that we found in the premium models can be attributed to the behavior of a single HMO, ConnectiCare. If we remove the observations from this plan, the effect of conversions of premiums is zero.

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Appendix on Data Construction

All HMOs report financial data to their state regulatory agencies. Beginning in 1985, American International Group, a property and casualty insurance company, began to collect these reports and sell them through its American International Healthcare (AIH) subsidiary based in Rockville, MD.

AIH was succeeded in this business by Health Care Investment Analysts (HCIA) of Baltimore, MD. HCIA is a health care information content company that develops and markets clinical and financial decision support systems used by hospitals, integrated delivery systems, managed care organizations, and pharmaceutical manufacturers.

HCIA publishes an HMO Database that is based on information supplied by HMOs to state regulators. The National Association of Insurance Commissioners (NAIC) has developed a recommended format for HMOs to use in making their annual reports. HMOs in all states except California, Massachusetts and New Jersey use the NAIC format. For HMOs in those states, HCIA conforms the data for fit the NAIC uniform format. The NAIC reporting form consists of the following reports:

Statement page: (name, address, directors and officers of the HMO)
Report #1A: balance sheet, assets
Report #1B: balance sheet, liabilities and net worth
Report #2: statement of revenue and expenses
Report #3: statement of changes in financial position and net worth
Report #4: enrollment and utilization table
General interrogatories
Schedules

Prior to 1998, we "linked" the AIH/HCIA financial data to information on the HMO (e.g., its headquarters location, model type, founding year, for-profit status, federal qualification, national affiliation, and enrollment) collected by InterStudy, an HMO "think tank" headquartered in suburban Minneapolis. InterStudy was founded by Dr. Paul Ellwood, a physician who is widely credited with coining the term, "health maintenance organization." InterStudy conducts an annual national census of HMOs and supplements the information obtained with phone calls to HMOs and state regulators.

Starting in 1998, InterStudy began to collect the HMO financial information in the format used by HCIA. From 1998 to 2001 we have relied on InterStudy for the financial data. This eliminates the need to link data from several sources on each HMO and can avoid confusion due to such things as mid-year name changes.

The definitions of the data were stable through 1997. Starting in 1998, some assets and liabilities were broken out into disaggregated categories, and the methods for reporting revenue changed significantly. Instead of reporting revenue by line of business (commercial, Medicare, and Medicaid), the financial reporting form requested revenue by type: premiums, fee-for-service, changes in unearned premium reserves, aggregate write-ins for other health-related revenue, and "risk revenue." The last category represents charges by the company for specific medical services provided to the members or policy holders of another insurer. HMOs also began providing information on revenue in each state where they operated (e.g., a Minnesota HMO that had some enrollees in Wisconsin reported revenue for each state). Fortunately,

these state-by-state reports were broken down by line of business. We added the disaggregated asset and liability measures so that they were similar to the prior years. We also summed the HMO's line-of-business revenue in each state to obtain revenue measures for the HMO equivalent to earlier years.

In 2001, the financial statements began combining hospital and physician expenses that had been reported separately in prior years. Inpatient and administrative expenses were imputed using the 2000 ratio of inpatient to inpatient and physician expenses. The autocorrelation of this ratio in prior years is about .75. The imputation adjusts the ratio to take into account changes in the mix of ambulatory and inpatient utilization.

We have used the information obtained in this manner in about 25 articles and reports, most of which have appeared in peer reviewed journals. The procedures for performing the calculations described below are also explained in those reports.

One of the terms used frequently in our report *is Health Maintenance Organization* or *HMO*. An HMO a health plan that offers prepaid, comprehensive health coverage for both hospital and physician services. Members are usually required to use participating providers and are enrolled for specified periods of time. InterStudy's National Census of HMOs lists only "full-service" HMOs that offer a compete range of services. HMOs that provide only dental care, for example, are not listed.

HMOs offer coverage to three distinct markets: commercial enrollees, Medicare, and Medicaid. Commercial enrollees comprise direct-pay members who purchase coverage as individuals, members who purchase coverage through employer groups, and the Federal Employees Health Benefits Plan (FEHBP).

Employer groups may be either fully insured or self-insured, the latter meaning that health services are paid by the member's employer. Self-insured groups are also known as "ERISA groups," after the federal law that regulates self-insured employer benefit plans. This report focuses only on the HMO's fully insured business. The enrollment and financial data *do not* include self-insured business.

Most of the analyses in this report combine the HMO's commercial premium revenue from all sources (direct-pay enrollees and small and large groups). However, the special analysis of the Health Insurance Plan of California (HIPC) examines small-group premiums, and the analysis of the Federal Employees Health Benefits Plan (FEHBP) focuses on the largest employment-related health insurance group in the United States.

The following financial and performance measures are used in the report:

Premium – The HMO's commercial premium is calculated on a "per member per month" (PMPM) basis as annual premium revenue for commercial enrollees (from the annual statement of revenue and expenses) divided by member-months of commercial coverage.

Months in Claims Payable – Claims payable (from the HMO's balance sheet) is the dollar amount of services provided to enrollees for which the HMO has not yet paid providers such as physicians and hospitals. Months in claims payable is a measure of how long the HMO takes to pay its providers. It is calculated as claims payable divided

by one-twelfth the sum of annual inpatient expenses, physician expenses, other provider expenses, emergency room and outside-area expenses, and referral expenses.

Price per Ambulatory Visit – The sum of physician expenses, other provider expenses, emergency room and outside-area expenses, and referral expenses divided by the annual number of outpatient visits used by all enrollees.

Price per Hospital Day – Annual inpatient expenses divided by annual inpatient days used by all enrollees.

Hospital Days/1,000 – Hospital days divided by member years in 1,000s.

Profit Margin – (Net income/total revenue) x 100. Total revenue includes investment income and aggregate write-ins for other revenues. Total expenses include medical and hospital expenses and administration.[27]

Administrative Ratio – (Administrative expenses/total expenses) x 100. This is a measure of the HMO's administrative costs.

[27] We also analyzed profit margin net of investment income and aggregate write-ins for other revenue.

TABLE 1

HMO POPULATION AND CONVERSIONS BY YEAR, 1987-2001

Year	# of HMOs	# For-Profit	% For-Profit	# of Conversions
1987	605	380	64.63	18
1988	613	383	66.96	9
1989	562	362	67.16	6
1990	531	348	67.31	3
1991	514	340	67.86	6
1992	494	335	68.37	0
1993	482	325	69.15	3
1994	492	341	70.60	2
1995	545	393	72.51	2
1996	597	440	73.95	3
1997	580	433	75.30	2
1998	582	431	74.57	2
1999	555	405	74.31	2
2000	505	370	73.85	2
2001	447	333	73.19	1

TABLE 2

MISSING VALUE ANALYSIS

Explanation of codes:

Not Missing = Financial data were matched to InterStudy data
Not Matched to InterStudy = No match was found between financial and InterStudy data
Nonsensical Value = Obviously nonsensical value (e.g., negative premium)
Trimmed = Trimmed by authors to eliminate unreasonable values
Missing Independent Variable = The dependent variable was present but one or more of the independent variables were missing in the model, so these cases were deleted.

Premium	***Frequency***	***Percent***
Not Missing	5867	72.35
Not Matched to InterStudy	1803	22.23
Nonsensical Value	166	2.05
Trimmed	70	0.86
Missing Independent Variable	203	2.50

Months in Claims Payable	***Frequency***	***Percent***
Not Missing	5525	68.13
Not Matched to InterStudy	1803	22.23
Nonsensical Value	504	6.22
Trimmed	3	0.04
Missing Independent Variable	274	3.38

Ambulatory Visits PMPY	***Frequency***	***Percent***
Not Missing	4889	60.29
Not Matched to InterStudy	1803	22.23
Nonsensical Value	1199	14.79
Trimmed	15	0.18
Missing Independent Variable	203	2.50

Price Per Ambulatory Visit	***Frequency***	***Percent***
Not Missing	4841	59.70
Not Matched to InterStudy	1803	22.23
Nonsensical Value	1145	14.12
Trimmed	112	1.38
Missing Independent Variable	208	2.57

Table 2 continued

Hospital Days Per 1000	***Frequency***	***Percent***
Not Missing	5639	69.54
Not Matched to InterStudy	1803	22.23
Nonsensical Value	450	5.55
Trimmed	12	0.15
Missing Independent Variable	205	2.53

Price Per Hospital Day	***Frequency***	***Percent***
Not Missing	5267	64.95
Not Matched to InterStudy	1803	22.23
Nonsensical Value	794	9.79
Trimmed	45	0.55
Missing Independent Variable	200	2.47

Profit Margin	***Frequency***	***Percent***
Not Missing	5942	73.28
Not Matched to InterStudy	1803	22.23
Nonsensical Value	49	0.60
Trimmed	5	0.06
Missing Independent Variable	310	3.82

TABLE 3

NATIONAL HMO DATA VARIABLE DEFINITIONS

Variable	Definition
Independent Variables:	
Intercept	constant term in each equation
Conversion -2 years	indicator =1 two years before conversion to for-profit status
Conversion -1 year	indicator =1 one year before conversion to for-profit status
Conversion year	indicator =1 in the year of conversion to for-profit status
Conversion +1 year	indicator =1 one year after conversion to for-profit status
Conversion +2 years	indicator =1 two years after conversion to for-profit status
For-profit	indicator =1 if HMO is for-profit
Age less than 2 years	indicator =1 if HMO is less than 2 years old
National HMO	indicator=1 if HMO is affiliated with a national organization
Blue Cross	indicator =1 if HMO is affiliated with Blue Cross
Federally-qualified	indicator =1 if HMO is federally qualified
Group model	indicator =1 for group model HMO
IPA model	indicator =1 for Independent Practice Association HMO
Mixed model	indicator =1 for mixed HMO model type
Network model	indicator =1 for network model HMO
Staff model	omitted model type
Open-ended product	indicator =1 if HMO offers open-ended product
Medicare	indicator =1 if HMO offers Medicare
Medicare %	% of HMO's enrollment in Medicare (as fraction)
Medicaid	indicator =1 if HMO offers Medicaid
Medicaid %	% of HMO's enrollment in Medicaid (as fraction)
Hospital days/1000	Hospital days per 1,000 enrollee years in this HMO
Hospital days missing	Indicator =1 if hospital days/1000 is missing
Income per capita	Market area income per capita
RN wage	Market area hourly wage for RNs
Hospital utilization	Market area hospital utilization in days/1000 population
Physician price	Market area price per physician visit
Hospital price	Market area price per hospital day
Number of HMOs	Number of HMOs in market area
HMO penetration	% of market area population enrolled in HMOs (as fraction)
Number x penetration	Interaction of number of HMOs x penetration
1987 ... 2001	Indicator variables for year with 2001 as the omitted year
Dependent Variables:	
Premium	Commercial premium per member month (in logarithms)
Claims Payable	Number of months in claims payable
Price of Hospital Day	Average price paid by this HMO for hospital day (in ln)
Price of Ambulatory Visit	Average price paid by this HMO for ambulatory visit (in ln)
Hospital Days/1000	Hospital days per 1,000 enrollee years in this HMO
Ambulatory Visits	Ambulatory visits per member year in this HMO
Profit Margin	Profit margin calculated as (net income/revenue) x 100

TABLE 4
HMO PREMIUM ANALYSIS

Effect	Estimate	Std. Error	t-Value	Probability
Intercept	4.489	0.072	62.112	0.000
conversion -2	-0.031	0.049	-0.630	0.529
conversion -1	-0.035	0.044	-0.803	0.422
conversion year	0.023	0.038	0.594	0.553
conversion +1	-0.025	0.039	-0.634	0.526
conversion +2	-0.006	0.040	-0.143	0.886
for-profit	-0.044	0.018	-2.450	0.014
age less than 2 years	0.007	0.014	0.485	0.628
national HMO	0.003	0.012	0.250	0.803
Blue Cross	0.022	0.020	1.095	0.274
federally-qualified	-0.034	0.012	-2.690	0.007
group model	0.004	0.029	0.130	0.896
IPA model	-0.019	0.024	-0.797	0.425
network model	-0.028	0.023	-1.204	0.229
mixed model	-0.055	0.025	-2.182	0.029
staff model	0			
open-ended product	-0.024	0.009	-2.638	0.008
Medicare	0.021	0.011	1.831	0.067
Medicare %	0.200	0.082	2.425	0.015
Medicaid	0.008	0.012	0.682	0.496
Medicaid %	0.103	0.039	2.641	0.008
hospital days/1000	0.000	0.000	5.402	0.000
hospital days missing	0.091	0.021	4.400	0.000
income per capita	0.120	0.019	6.386	0.000
hospital utilization	0.020	0.027	0.712	0.476
physician price	0.000	0.000	4.220	0.000
hospital price	0.000	0.000	7.001	0.000
number of HMOs	-0.004	0.003	-1.672	0.095
HMO penetration	0.023	0.127	0.179	0.858
number x penetration	-0.012	0.011	-1.051	0.293
1987	-0.646	0.035	-18.444	0.000
1988	-0.601	0.034	-17.855	0.000
1989	-0.459	0.031	-14.639	0.000
1990	-0.367	0.029	-12.597	0.000
1991	-0.295	0.028	-10.439	0.000
1992	-0.240	0.027	-8.991	0.000
1993	-0.224	0.026	-8.767	0.000
1994	-0.192	0.024	-7.936	0.000
1995	-0.203	0.022	-9.045	0.000
1996	-0.246	0.021	-11.445	0.000
1997	-0.237	0.021	-11.348	0.000
1998	-0.212	0.019	-10.932	0.000
1999	-0.159	0.019	-8.482	0.000
2000	-0.093	0.018	-5.066	0.000
2001	0			

TABLE 5
CLAIMS PAYABLE ANALYSIS

Effect	Estimate	Std. Error	t-Value	Probability
Intercept	3.442	0.322	10.677	0.000
conversion -2	0.138	0.208	0.665	0.506
conversion -1	0.518	0.181	2.856	0.004
conversion year	0.178	0.150	1.188	0.235
conversion +1	-0.033	0.157	-0.207	0.836
conversion +2	0.020	0.166	0.118	0.906
for-profit	0.110	0.068	1.602	0.109
age less than 2 years	0.459	0.060	7.664	0.000
national HMO	0.200	0.048	4.157	0.000
Blue Cross	0.212	0.078	2.718	0.007
federally-qualified	-0.115	0.048	-2.380	0.017
group model	0.005	0.116	0.040	0.968
IPA model	0.381	0.091	4.198	0.000
network model	0.262	0.089	2.928	0.003
mixed model	0.148	0.097	1.515	0.130
staff model	0			
ln enrollment	-0.213	0.017	-12.399	0.000
open-ended product	0.109	0.036	3.054	0.002
Medicare	0.011	0.041	0.259	0.796
Medicare %	-0.009	0.009	-0.984	0.325
Medicaid	0.101	0.043	2.343	0.019
Medicaid %	0.064	0.032	2.020	0.043
hospital days/1000	-0.000	0.000	-1.105	0.269
hospital days missing	0.094	0.079	1.185	0.236
income per capita	0.197	0.074	2.674	0.008
hospital utilization	0.047	0.105	0.443	0.658
physician price	-0.001	0.000	-3.051	0.002
hospital price	-0.000	0.000	-1.598	0.110
number of HMOs	0.040	0.010	3.992	0.000
HMO penetration	1.548	0.500	3.094	0.002
number x penetration	-0.186	0.045	-4.167	0.000
1987	0.221	0.138	1.602	0.109
1988	0.105	0.132	0.791	0.429
1989	0.068	0.123	0.552	0.581
1990	0.066	0.115	0.573	0.567
1991	0.006	0.111	0.058	0.954
1992	-0.007	0.105	-0.063	0.950
1993	0.068	0.101	0.668	0.504
1994	0.040	0.096	0.411	0.681
1995	-0.035	0.090	-0.394	0.693
1996	-0.040	0.086	-0.463	0.644
1997	-0.127	0.084	-1.512	0.131
1998	-0.004	0.078	-0.055	0.956
1999	0.079	0.076	1.044	0.297
2000	0.019	0.075	0.248	0.804
2001	0			

TABLE 6
PRICE OF AMBULATORY VISIT

Effect	Estimate	Std. Error	t-Value	Probability
Intercept	4.282	0.231	18.548	0.000
conversion -2	-0.069	0.101	-0.689	0.491
conversion -1	-0.025	0.097	-0.255	0.799
conversion year	0.058	0.080	0.719	0.472
conversion +1	-0.063	0.076	-0.825	0.409
conversion +2	-0.001	0.078	-0.010	0.992
for-profit	-0.036	0.035	-1.012	0.312
age less than 2 years	0.092	0.029	3.169	0.002
national HMO	0.012	0.025	0.509	0.611
Blue Cross	0.026	0.041	0.643	0.520
federally-qualified	0.043	0.024	1.774	0.076
group model	0.008	0.056	0.146	0.884
IPA model	0.042	0.046	0.922	0.357
network model	0.131	0.045	2.941	0.003
mixed model	0.102	0.050	2.056	0.040
staff model	0			
ln enrollment	0.005	0.008	0.543	0.587
open-ended product	-0.017	0.018	-0.972	0.331
Medicare	-0.024	0.022	-1.055	0.292
Medicare %	0.145	0.131	1.107	0.268
Medicaid	-0.005	0.021	-0.220	0.826
Medicaid %	0.013	0.015	0.894	0.371
income per capita	0.097	0.038	2.588	0.010
hospital utilization	0.122	0.052	2.343	0.019
RN wage	0.002	0.009	0.166	0.868
number of HMOs	0.006	0.005	1.292	0.197
HMO penetration	-0.007	0.242	-0.028	0.977
number x penetration	-0.008	0.022	-0.379	0.705
1987	-0.326	0.102	-3.196	0.001
1988	-0.252	0.095	-2.666	0.008
1989	-0.161	0.086	-1.867	0.062
1990	-0.065	0.077	-0.845	0.398
1991	0.009	0.071	0.123	0.902
1992	0.059	0.066	0.899	0.369
1993	0.077	0.061	1.266	0.206
1994	0.081	0.054	1.505	0.132
1995	0.070	0.048	1.468	0.142
1996	0.036	0.044	0.838	0.402
1997	-0.032	0.041	-0.791	0.429
1998	-0.012	0.037	-0.319	0.750
1999	-0.012	0.036	-0.338	0.736
2000	-0.042	0.036	-1.164	0.244
2001	0			

TABLE 7
PRICE OF HOSPITAL DAY

Effect	Estimate	Std. Error	t-Value	Probability
Intercept	6.814	0.168	40.530	0.000
conversion -2	0.133	0.074	1.808	0.071
conversion -1	-0.061	0.068	-0.907	0.365
conversion year	0.034	0.057	0.598	0.550
conversion +1	-0.011	0.057	-0.190	0.850
conversion +2	0.020	0.060	0.333	0.739
for-profit	0.039	0.024	1.597	0.110
age less than 2 years	0.007	0.022	0.321	0.748
national HMO	0.029	0.018	1.603	0.109
Blue Cross	0.053	0.028	1.880	0.060
federally-qualified	0.019	0.018	1.067	0.286
group model	0.049	0.043	1.139	0.255
IPA model	0.061	0.034	1.788	0.074
network model	0.074	0.034	2.155	0.031
mixed model	0.061	0.037	1.664	0.096
staff model	0			
ln enrollment	0.005	0.006	0.811	0.417
open-ended product	-0.015	0.014	-1.115	0.265
Medicare	-0.049	0.017	-2.879	0.004
Medicare %	-0.253	0.098	-2.594	0.010
Medicaid	-0.033	0.019	-1.796	0.073
Medicaid %	-0.099	0.055	-1.808	0.071
income per capita	0.030	0.028	1.083	0.279
hospital utilization	-0.112	0.038	-2.967	0.003
RN wage	0.016	0.007	2.340	0.019
number of HMOs	-0.007	0.004	-2.009	0.045
HMO penetration	-0.610	0.184	-3.320	0.001
number x penetration	0.048	0.017	2.870	0.004
1987	-0.479	0.075	-6.414	0.000
1988	-0.454	0.070	-6.520	0.000
1989	-0.332	0.063	-5.247	0.000
1990	-0.277	0.057	-4.882	0.000
1991	-0.179	0.052	-3.419	0.001
1992	-0.097	0.048	-2.010	0.045
1993	-0.074	0.045	-1.633	0.103
1994	-0.055	0.041	-1.342	0.180
1995	-0.029	0.036	-0.797	0.426
1996	-0.038	0.034	-1.129	0.259
1997	-0.075	0.032	-2.365	0.018
1998	-0.055	0.029	-1.862	0.063
1999	-0.034	0.029	-1.176	0.239
2000	0.041	0.028	1.426	0.154
2001	0			

TABLE 8
AMBULATORY VISITS ANALYSIS

Effect	Estimate	Std. Error	t-Value	Probability
Intercept	7.586	0.712	10.648	0.000
conversion -2	-0.420	0.469	-0.895	0.371
conversion -1	-0.288	0.439	-0.655	0.513
conversion year	-0.062	0.360	-0.174	0.862
conversion +1	-0.547	0.357	-1.533	0.125
conversion +2	-0.483	0.369	-1.307	0.191
for-profit	-0.022	0.163	-0.134	0.893
age less than 2 years	-0.455	0.134	-3.406	0.001
national HMO	-0.066	0.114	-0.584	0.559
Blue Cross	-0.335	0.187	-1.792	0.073
federally-qualified	-0.434	0.113	-3.850	0.000
group model	-0.110	0.257	-0.427	0.669
IPA model	-0.096	0.212	-0.454	0.650
network model	-0.334	0.206	-1.625	0.104
mixed model	-0.588	0.230	-2.563	0.010
staff model	0			
ln enrollment	0.082	0.039	2.090	0.037
open-ended product	0.250	0.083	3.015	0.003
Medicare	-0.071	0.104	-0.690	0.490
Medicare %	5.077	0.577	8.797	0.000
Medicaid	-0.101	0.099	-1.025	0.306
Medicaid %	-0.051	0.067	-0.754	0.451
income per capita	-0.264	0.169	-1.561	0.119
hospital utilization	-0.260	0.241	-1.081	0.280
number of HMOs	-0.018	0.023	-0.770	0.441
HMO penetration	0.554	1.119	0.495	0.621
number x penetration	-0.025	0.102	-0.247	0.805
1987	-2.165	0.301	-7.191	0.000
1988	-2.183	0.289	-7.543	0.000
1989	-2.234	0.272	-8.213	0.000
1990	-2.052	0.255	-8.045	0.000
1991	-2.003	0.250	-8.019	0.000
1992	-1.862	0.239	-7.780	0.000
1993	-1.766	0.229	-7.716	0.000
1994	-1.822	0.215	-8.471	0.000
1995	-1.632	0.200	-8.143	0.000
1996	-1.325	0.191	-6.943	0.000
1997	-0.759	0.186	-4.089	0.000
1998	-0.764	0.171	-4.473	0.000
1999	-0.611	0.166	-3.683	0.000
2000	-0.271	0.165	-1.647	0.100
2001	0			

TABLE 9
HOSPITAL DAYS ANALYSIS

Effect	Estimate	Std. Error	t-Value	Probability
Intercept	149.746	31.983	4.682	0.000
conversion -2	-6.494	21.523	-0.302	0.763
conversion -1	-5.390	19.144	-0.282	0.778
conversion year	2.532	16.593	0.153	0.879
conversion +1	17.423	16.299	1.069	0.285
conversion +2	18.665	17.408	1.072	0.284
for-profit	-15.228	6.910	-2.204	0.028
age less than 2 years	9.135	6.412	1.425	0.154
national HMO	-18.393	5.131	-3.585	0.000
Blue Cross	0.724	8.055	0.090	0.928
federally-qualified	-0.693	5.110	-0.136	0.892
group model	-2.702	11.930	-0.227	0.821
IPA model	32.054	9.668	3.315	0.001
network model	14.133	9.666	1.462	0.144
mixed model	16.640	10.416	1.598	0.110
staff model	0			
ln enrollment	4.595	1.799	2.554	0.011
open-ended product	-2.124	3.916	-0.542	0.588
Medicare	8.163	4.872	1.676	0.094
Medicare %	1012.287	27.632	36.634	0.000
Medicaid	-3.221	5.317	-0.606	0.545
Medicaid %	154.941	15.277	10.142	0.000
income per capita	4.892	7.619	0.642	0.521
hospital utilization	89.296	10.810	8.260	0.000
number of HMOs	0.359	1.038	0.346	0.729
HMO penetration	146.804	52.318	2.806	0.005
number x penetration	-9.364	4.731	-1.979	0.048
1987	64.455	13.770	4.681	0.000
1988	61.927	13.272	4.666	0.000
1989	52.688	12.402	4.248	0.000
1990	57.102	11.744	4.862	0.000
1991	42.112	11.495	3.663	0.000
1992	24.111	11.043	2.183	0.029
1993	-2.364	10.634	-0.222	0.824
1994	-20.603	10.109	-2.038	0.042
1995	-29.518	9.466	-3.118	0.002
1996	-33.188	9.135	-3.633	0.000
1997	-24.519	8.870	-2.764	0.006
1998	-33.907	8.275	-4.098	0.000
1999	-33.084	8.041	-4.114	0.000
2000	-11.093	8.030	-1.381	0.167
2001	0			

TABLE 10
PROFIT MARGIN ANALYSIS

Effect	Estimate	Std. Error	t-Value	Probability
Intercept	-62.127	6.064	-10.245	0.000
Conversion -2	-0.361	4.237	-0.085	0.932
Conversion -1	-1.846	3.743	-0.493	0.622
Conversion year	-1.162	3.286	-0.354	0.724
Conversion +1	-1.796	3.286	-0.547	0.585
Conversion +2	-0.034	3.486	-0.010	0.992
for-profit	-1.568	1.142	-1.372	0.170
age less than 2 years	-18.389	1.260	-14.591	0.000
national HMO	0.250	0.931	0.269	0.788
Blue Cross	-1.099	1.383	-0.795	0.427
federally-qualified	-2.571	0.913	-2.817	0.005
group model	2.115	2.205	0.959	0.337
IPA model	1.333	1.790	0.745	0.456
network model	-1.788	1.833	-0.975	0.329
mixed model	2.840	1.940	1.464	0.143
staff model	0			
ln enrollment	5.944	0.327	18.163	0.000
open-ended product	-1.672	0.764	-2.189	0.029
Medicare	-0.374	0.856	-0.436	0.663
Medicare %	0.124	0.195	0.639	0.523
Medicaid	-0.654	0.880	-0.743	0.458
Medicaid %	0.570	0.723	0.789	0.430
hospital days/1000	0.005	0.002	1.974	0.048
hospital days missing	-0.323	1.626	-0.199	0.843
income per capita	-1.154	1.330	-0.867	0.386
hospital utilization	-1.335	1.887	-0.707	0.479
physician price	0.004	0.008	0.552	0.581
hospital price	0.002	0.001	1.491	0.136
number of HMOs	-0.571	0.194	-2.947	0.003
HMO penetration	-9.182	9.881	-0.929	0.353
number x penetration	1.479	0.879	1.683	0.092
1987	-7.142	2.673	-2.672	0.008
1988	0.699	2.604	0.269	0.788
1989	6.732	2.434	2.765	0.006
1990	8.238	2.284	3.607	0.000
1991	8.296	2.230	3.720	0.000
1992	8.250	2.132	3.870	0.000
1993	7.316	2.065	3.542	0.000
1994	8.415	1.989	4.230	0.000
1995	3.293	1.886	1.746	0.081
1996	2.213	1.835	1.206	0.228
1997	0.999	1.798	0.555	0.579
1998	-1.802	1.699	-1.060	0.289
1999	0.404	1.660	0.244	0.808
2000	0.129	1.651	0.078	0.938
2001	0			

TABLE 11
ADMINISTRATIVE RATIO ANALYSIS

Effect	Estimate	Std. Error	t-Value	Probability
Intercept	33.19	1.80	18.44	0.00
conversion -2	0.56	1.06	0.53	0.60
conversion -1	1.30	0.95	1.37	0.17
conversion year	0.73	0.83	0.88	0.38
conversion +1	0.32	0.83	0.38	0.70
conversion +2	0.11	0.87	0.12	0.90
for-profit	1.57	0.37	4.18	0.00
age less than 2 years	4.29	0.33	12.96	0.00
national HMO	0.58	0.27	2.17	0.03
Blue Cross	-0.74	0.43	-1.73	0.08
federally-qualified	-0.41	0.27	-1.53	0.13
group model	-1.54	0.62	-2.49	0.01
IPA model	-0.44	0.51	-0.87	0.38
network model	-0.74	0.50	-1.47	0.14
mixed model	-0.79	0.54	-1.45	0.15
staff model	0			
ln enrollment	-2.36	0.10	-23.74	0.00
open-ended product	0.15	0.20	0.77	0.44
Medicare	-0.23	0.23	-1.00	0.32
Medicare %	0.02	0.05	0.32	0.75
Medicaid	-0.27	0.24	-1.13	0.26
Medicaid %	0.52	0.18	2.88	0.00
hospital days/1000	-0.00	0.00	-5.08	0.00
hospital days missing	-0.71	0.43	-1.66	0.10
income per capita	2.06	0.40	5.14	0.00
hospital utilization	-1.40	0.58	-2.41	0.02
physician price	-0.00	0.00	-0.20	0.84
hospital price	-0.00	0.00	-1.97	0.05
number of HMOs	0.15	0.05	2.98	0.00
HMO penetration	-2.09	2.64	-0.79	0.43
number x penetration	-0.09	0.22	-0.39	0.70
1987	5.52	0.75	7.33	0.00
1988	4.13	0.73	5.67	0.00
1989	2.89	0.68	4.26	0.00
1990	2.83	0.64	4.43	0.00
1991	2.92	0.61	4.78	0.00
1992	2.92	0.58	5.03	0.00
1993	3.25	0.56	5.82	0.00
1994	4.46	0.53	8.40	0.00
1995	4.84	0.50	9.76	0.00
1996	4.71	0.48	9.83	0.00
1997	4.83	0.46	10.39	0.00
1998	3.90	0.43	9.00	0.00
1999	2.90	0.42	6.96	0.00
2000	2.45	0.41	5.97	0.00
2001	0			

TABLE 12
PREDICTED AND ACTUAL PERFORMANCE OF BLUE CROSS OF CALIFORNIA HMO

YEAR	MBRMTH	PREMIUM	P-PREMIUM	CLAIMS	P-CLAIMS	HSPDAYS	P-DAYS	HOSP$	P-HOSP$	ADRAT	P-RAT	PROFIT	P-PROFIT
87													
88													
89													
90													
91													
92													
93	22203622	94.671	102.274	3.025	2.827	280.136	268.836	1284.875	1406.732	19.13	15.71	6.697	9.196
94	24585841	99.137	112.743	2.388	2.581	252.693	249.735	1509.543	1545.909	18.29	16.83	6.321	10.459
95	25903626	99.374	104.179	2.019	2.284	241.746	251.037	1543.168	1565.986	16.93	16.76	6.214	5.378
96	27751503	98.729	94.844	2.111	2.308	208.131	247.681	1697.856	1670.552	17.38	16.72	6.132	6.464
97													
98	40459757	111.533	103.752	2.435	2.238	246.975	231.904	1710.231	1617.591	15.23	16.20	4.731	7.157
99	44450582	121.030	115.302	2.650	2.127	248.987	234.378	1760.092	1707.456	15.77	15.08	4.838	11.380
100	48150201	132.682	128.762	2.900	2.046	257.402	269.476	1940.731	1787.506	15.77	13.44	5.484	13.569
101	51117782	143.754	145.434		2.132	262.542	285.840	2142.023	1680.291	14.99	11.25		12.406

Titles:
MBRMTH = total member months of enrollment
PREMIUM = premium per month for commercial enrollees
P-PREMIUM = predicted premium
CLAIMS = number of months in claims payable
P-CLAIMS = predicted months in claims payable
HSPDAYS = hospital days per 1,000 member years
P-DAYS = predicted hospital days
HOSP$ = price per hospital day
P-HOSP$ = predicted price per hospital day
PROFIT = profit margin
P-PROFIT = predicted profit margin
ADRAT = administrative ratio
P-RAT = predicted administrative ratio

TABLE 13

FEHBP VARIABLE DEFINITIONS

Variable	Definition
Independent Variables:	
Intercept	constant term in each equation
Conversion year	indicator = 1 in the year of conversion to for-profit status
For-profit	indicator = 1 if the HMO is for-profit
Quality of care	enrollee's rating of quality of care in their health plan on 100-point scale
Extremely satisfied %	% of enrollees who are extremely satisfied with their health plan
Top-rated plan	indicator = 1 if the health plan has overall satisfaction score significantly higher than the average overall score
Access	% of enrollees who rated access to medical care (arranging for and getting care) in their health plan as *good, very good, or excellent*
Coverage	% of enrollees who rated coverage (range of services covered) in their health plan as *good, very good, or excellent*
1997 ... 2001	indicator variables for year with 1997 always the omitted year
Dependent Variables:	
Premium	Natural logarithm of premium for high-option coverage (single or family)
Quality of care	enrollee's rating of quality of care in their health plan on 100-point scale
Extremely satisfied %	% of enrollees who are extremely satisfied with their health plan

TABLE 14

FEHBP RESULTS

Dependent Variable	Independent Variable	Coefficient	t-Value	Prob.
1. Single premium (including quality)	Intercept	4.0994	24.42	0.000
	Conversion year	-0.249	-2.87	0.004
	For-profit	-0.0147	-1.08	0.278
	Quality of care	0. 00247	1.60	0.110
	Top-rated plan	-0.0180	-1.80	0.071
	Extremely satisfied %	-0.000333	-0.60	0.551
	Access	0.00110	0.71	0.480
	Coverage	-0.000798	-0.74	0.462
	1998	0.0518	8.16	0.000
	1999	0.379	3.59	0.000
	2000	0.000		
2. Single premium (excluding quality)	Intercept	4.251	83.28	0.000
	Conversion year	-0.217	-3.52	0.000
	For-profit	-0.0123	-1.23	0.219
	1998	0.171	3.02	0.003
	1999	0.161	2.11	0.035
	2000	0.000		
3. Family premium (including quality)	Intercept	5.196	34.07	0.000
	Conversion year	-0.298	-3.59	0.000
	For-profit	-0.0118	-1.01	0.312
	Quality of care	0. 0140	0.94	0.347
	Top-rated plan	-0.00927	-0.97	0.332
	Extremely satisfied %	-0.000339	-0.63	0.529
	Access	0.0000638	0.04	0.966
	Coverage	-0.000860	-0.83	0.408
	1998	0.0488	7.92	0.000
	1999	0.187	1.85	0.064
	2000	0.000		
4. Family premium (excluding quality)	Intercept	5.145	111.79	0.000
	Conversion year	-0.184	-3.13	0.002
	For-profit	-0.0710	-0.81	0.418
	1998	0.175	3.23	0.001
	1999	0.239	3.28	0.001
	2000	0.000		

Table 14 (continued)

5. Quality of care	Intercept	89.851	26.12	0.000
	Conversion year	0.698	0.19	0.847
	For-profit	-0.851	-2.62	0.009
	1998	3.000	0.81	0.421
	1999	-87.000	-17.96	0.000
	2000	0.000		
6. Quality of care	Intercept	17.694	1.96	0.050
	Conversion year	7.565	1.26	0.208
	For-profit	-0.694	-1.83	0.067
	1998	13.000	1.77	0.077
	1999	-6.000	-0.82	0.415
	2000	0.000		

TABLE 15

PREMIUM COMPARSIONS IN THE FEHBP, 1997-2001

$/Month Single Premiums:

Year	Average	Yellowstone	HIP	ConnectiCare
1997	74.45	65.74		107.96
1998	78.13	65.48		112.69
1999	84.36	**76.40**		**88.47**
2000	92.44		98.96	91.96
2001	104.82		**103.86**	94.53

$/Month Family Premiums:

Year	Average	Yellowstone	HIP	ConnectiCare
1997	188.65	170.53		239.74
1998	197.20	169.86		250.24
1999	212.30	**198.09**		**196.61**
2000	232.28		273.59	240.82
2001	*262.43*		***287.12***	*247.55*

Conversion-year premiums are shown in **bold**

Access, care unharmed by Blue Cross conversions: uninsured rates have not risen.(Practice Trends)

OB/GYN News, August 15, 2003, by Joyce Frieden

WILMINGTON, DEL. -- The conversion of Blue Cross plans from nonprofit to for profit does not appear to significantly hurt access to health insurance or health care, Mark Hall said at the annual meeting of the American Society of Law, Medicine, and Ethics.

Mr. Hall, professor of law and public health at Wake Forest University, Winston-Salem, N.C., and Chris Conover, Ph.D., Duke University, Durham, N.C., studied Blue Cross conversions in California, Georgia, Missouri, and Virginia to determine conversion's effects on health care access and affordability.

"We found that conversions don't have a strong or consistent negative effect on affordability or accessibility," Mr. Hall said. "The percent of people with insurance remained basically the same. In some states, it improved; in other states, it got worse, but there wasn't a consistent pattern showing that the macrolevel health policy measures--spending and [the uninsured]--became consistently worse. If something big, bad, or ugly were happening consistently, it would have shown up in this superficial cut of the data, but it didn't."

Most experts interviewed for the study felt there was little change in the plans' behavior in pricing, underwriting, and product offerings after the conversions took place, he continued. "The predominant view was that the primary drivers [in the plans' behavior] are the competitive market forces and regulatory rules, rather than organizational form or corporate culture."

However, converted plans did appear to become more intense about provider contracting and demanding greater discounts from hospitals and physicians, and they were willing to terminate contracts if they didn't get what they wanted.

"Certain underwriting practices were pointed out as being [related] to conversion such as closing some association pools and plans that used to have favorable rating practices, such as rural cooperatives," Mr. Hall noted. However, some experts have argued that it was the difficulty of meeting requirements under the federal Health Insurance Portability and Accountability Act (HIPAA) that caused the plans to fold.

JOYCE FRIEDEN

Associate Editor, Practice Trends

Exhibit C

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The Impact of Blue Cross Conversions on Accessibility, Affordability, and the Public Interest

Mark A. Hall and Christopher J. Conover

Wake Forest University; Duke University

For-profit organization in health care delivery has been a major public policy issue since at least the 1980s, driven by the growth of for-profit hospital chains and a wave of conversions by nonprofit hospitals. As significant as these events have been, however, they pale in comparison with the potential impact of conversions by Blue Cross and/or Blue Shield plans (which we refer to generically as Blue Cross, abbreviated BC). Because Blue Cross plans are the largest health insurer in almost every state (or substate region where they operate), these conversions could remake the corporate landscape of health care finance. Although BC plans no longer hold the overwhelming market share they enjoyed 50 years ago (when they commanded more than two-thirds of the commercial market; see Blackstone and Fuhr 1998), their share still is considerable. Blue Cross controls at least half the individual market in 33 states and more than a third of the group market in 29 states (Chollet, Kirk, and Chow 2000; McCann 2003). Because BC plans are locally based and have historical roots in the hospital industry and medical profession, they are enormously influential in political and health policy circles. They are one of the most important groups of private institutions in the nation's health care system, and they have the same status in most states.

Access to investor capital is one corporate motivation for conversion (McCann 2003). Another is to facilitate the acquisition of, or merger with, other entities, which itself requires additional capital. Therefore, it is difficult to disentangle the two motivations. Blue Cross plans have a variety of possible incentives to merge across state lines, such as achieving economies of scale, serving multistate employers, spreading risk across markets and regulatory structures, expanding products and services, and defending against the widespread consolidation of for-profit commercial carriers (Grossman and Strunk 2001). Critics of conversion are concerned, however, that another strong motivation for conversion may well be the private benefit to Blue Cross managers.

The string of Blue Cross conversions is bookended by the largest Blue Cross plans in the two largest states: BC of California, starting in 1993, and Empire BC in eastern New York, concluding in late 2002. (In both instances, one or more other BC plans in the same state have not converted.) Over this ten-year span, Blue Cross plans in 13 other states have converted to for-profit status, and most of these have merged into two large holding companies: Wellpoint, which owns the plans in three states, and Anthem, which owns the plans in nine states. (In October 2003, Wellpoint and Anthem announced plans to merge.) As a result, by March 31, 2003, more than one-quarter of Blue

Cross subscribers nationwide belonged to a for-profit plan, a total of 21.5 million members. Conversion proposals are currently pending in Washington State and Alaska and were rejected recently in Kansas and Maryland. In North Carolina, the BC plan withdrew its conversion proposal in July 2003 after more than a year of regulatory review proceedings. Although a core of Blue Cross plans insist that they will remain nonprofit, if these trends continue the trademark may become dominated by for-profit plans.

Blue Cross conversions usually result in battles on one or more of three fronts: legislative, regulatory, and judicial. In the initial round of conversions, the focus of these fights was on legal issues regarding the charitable status of BC plans and issues regarding the economic value created by conversion. In more recent conversions, however, Blue Cross plans conceded that they were subject to the law of charities and proposed turning over their entire value to a foundation. As a result, conversion battles are focusing more on the public policy implications of conversion. Opponents of conversion, including public interest advocates and health care providers, have tried to block conversions under statutes that require conversions to be in the interest of either the public or policyholders, or at least not contrary to these interests.

This public policy focus requires regulators to determine whether conversion will raise insurance rates, reduce coverage, disrupt provider networks, reduce subsidies for the public goods aspects of health care, and lead to other negative effects. Thus, in February 2002, the insurance commissioner in Kansas rejected a proposal by Anthem to buy the BC plan there because she found this would likely increase rates substantially for individual and small-group insurance, a finding sustained by the Kansas Supreme Court. In Maryland, in March 2003, the insurance commissioner rejected an acquisition bid by Wellpoint, in part because the record was insufficient to predict its effect on the availability and accessibility of health insurance and because BC's board did not consider these factors before accepting the bid. In New York in 2002, the insurance commissioner approved the conversion of Empire BC, but only after setting conditions that subject it for several years to greater scrutiny of individual and Medigap rates than that given to the rates of other for-profit insurers. The state of Virginia, where the BC plan had converted in 1997, also addressed public interest factors in a July 2002 order approving its acquisition by Anthem, by conditioning its approval on Blue Cross's not moving its operational units out of state. In North Carolina, the BC plan withdrew its conversion proposal in July 2003, partly because of indications that the commissioner of insurance was considering greater oversight of rate increases following any conversion. Finally, Washington State is evaluating various health policy issues in considering the conversion proposal of its BC plan (which also serves Alaska).

In each of these proceedings, regulators have had to decide whether conversion and/or acquisition would change the BC plan's pricing, design, and marketing of its products; its contracts with providers; its medical underwriting; its customer service and managed care practices; and its broader role in public policy and regulatory affairs. Regulators have also evaluated whether the benefits from a new foundation would offset any detriments from conversion. Because these issues are complex and difficult to assess, we review the available evidence and information, drawing primarily on studies and analyses conducted in connection with the conversion contests in 2002 and 2003. We begin by describing the pressures created by conversion to increase profits and lower the medical loss ratio, and then we discuss in detail each of the major components of the medical loss ratio: premium rates, product offerings, underwriting practices, utilization management, and provider payment rates. We conclude by considering broader public policy factors, including the foundations created by conversion.

Conversion As an Event versus Conversion As a Process

In order to gauge the impact of conversions on the public interest, we must first clarify what constitutes a conversion. One view, which we call "conversion as an event," is that conversion is a discrete set of corporate transactions that alters the corporate form. Conversions can take several forms (McCann 2003). The most straightforward one is to change from a nonprofit corporation or mutual insurer to a publicly traded stock company. For-profits can also be privately held, however. In addition, conversions can occur as a freestanding event or can be part of, or be quickly followed by, an acquisition by a larger company or a merger with a peer company. Finally, all of the above can apply to either an entire Blue Cross corporate structure or only a portion of one by forming a holding

company that mixes nonprofit and for-profit entities.

Another view is that conversion is a longer planning and strategic process that begins several years before the actual legal event of conversion. We call this "conversion as a process." This view is supported by the fact that, anticipating conversion, BC plans usually begin to change their operations well before conversion in order to enhance the value of stock when it is first sold to the public. A leading industry adviser, for instance, recommends that before conversion, a Blue Cross plan should "develop a for-profit culture, . . . tighten its medical management, hit its earnings targets and shore up its operating surplus—or leave its conversion plans on the shelf" (Fluegel 2002, 3). Because this process may begin several years before the actual conversion, assessments may miss a conversion's true impact if they focus only on the one or two years immediately preceding conversion.

Rather than choose between these two views, our analysis takes into account both views. Under the extreme version of the process view, many changes likely to result from conversion will have already occurred by the time of conversion, so that the date of conversion could be mostly a nonevent. Any changes in corporate behavior in anticipation of conversion might, however, fairly be counted as one of the consequences of the conversion process overall. Also, regulatory and public scrutiny while seeking approval for conversion may have a restraining effect on the behavior of BC plans seeking to convert. Therefore, one way to balance these two contrasting views is to assume that any profit-driven changes in behavior leading up to conversion are likely to continue and intensify after conversion.

Purpose and Methodology

To evaluate the public policy impacts of a conversion proposed by Blue Cross and Blue Shield of North Carolina, the North Carolina Department of Insurance requested in 2002 that we conduct case studies of the Blue Cross plans that had converted to for-profit status in California, Georgia, Missouri, and Virginia (Conover and Hall 2003). These states were chosen because they each had freestanding Blue Cross conversions (not initially part of an outside acquisition) that had been in place for several years. These conversions occurred as follows:

- In January 1993, Blue Cross of California transferred most of its managed care business to its for-profit subsidiary, Wellpoint, and sold 20 percent of the Wellpoint stock in an initial public offering. Under pressure from regulators, BC agreed to fund two foundations with stock valued at more than $3 billion. It completed its conversion in May 1996 when Wellpoint became the parent company for all corporate assets.
- Blue Cross and Blue Shield of Georgia converted from a mutual form in February 1996 to a for-profit company called Cerulean. Litigation by citizen groups was settled in July 1998 with an agreement to create a foundation with 20 percent of the new corporation's stock, which at the time was valued at $40 million to $80 million. At the same time, California-based Wellpoint announced a deal to buy Cerulean. The sale was delayed by a shareholder lawsuit, which did not settle until October 2000, with an agreement to pay policyholders $5,900 per share. The sale was completed in March 2001. At that point, the foundation was worth about $120 million.
- In August 1994, Blue Cross and Blue Shield of Missouri put 80 percent of its assets in a for-profit subsidiary, RightChoice, and issued stock. In May 1996, the state's department of insurance and attorney general each filed suit to challenge the conversion. In January 2000, the suits were settled with an agreement to use RightChoice stock to create a foundation valued at nearly $500 million. In November 2000, Blue Cross and Blue Shield of Missouri converted entirely to for-profit. In January 2002, Wellpoint purchased RightChoice, resulting in an increase in stock value that made the foundation worth almost $1 billion.
- In January 1997, Blue Cross and Blue Shield of Virginia converted from a nonprofit mutual form to a for-profit, publicly traded stock company called Trigon. At the same time, it paid $175 million to a state-run trust fund. On July 31, 2002, Indiana-based Anthem purchased Trigon for $4.2 billion.

We based our case studies in each of these states on confidential interviews and a review of the

published literature and available documents. In each state, we interviewed nine to 12 subjects, including two or three insurance agents, two or three regulators, one or two consumer advocates, two to four provider representatives, and one to three industry observers. We also interviewed four national experts on Blue Cross plans and insurance markets across the country, including a health policy analyst and a consultant for Blue Cross plans (both of whom believe that Blue Cross plans should remain nonprofit) and two market analysts who consult with major for-profit and nonprofit national health plans. We covered the same general topics in each set of interviews, although they differed somewhat according to the type of interview subject and each individual's perspective and knowledge.

We also searched the databases of one or two leading newspapers in each state for relevant articles, as well as those of academic journals (health policy and economics) and industry publications such as *Modern Healthcare* and the Bureau of National Affairs' *Health Policy Reporter* and *Health Law Reporter*. In addition, we looked at the Web sites of the regulatory agencies and Blue Cross plans for relevant information and records. We also obtained documents from some interview subjects, mainly regulators and advocacy groups, and from pending or recent conversion proceedings in other states, including Kansas, Maryland, New York, and North Carolina. Finally, we used standard qualitative research methods to compile, interpret, and report this information.

General Profitability

Blue Cross plans typically claim that their operations will not be affected by conversion, except perhaps that the new profit orientation will increase their incentives to reduce administrative costs. We evaluate these claims first by analyzing possible changes in overall incentives to generate profits and then by looking separately at each of the components of profitability. Our aim is to determine whether conversion changed Blue Cross's management and operations in ways that were either favorable or unfavorable for accessibility, affordability, and the public interest generally. We look beyond the stated intentions of particular BC managers and instead focus on the fundamental incentives created by conversion, the market and regulatory structures in which these incentives function, and the track records of earlier BC conversions.

Profit Pressures

It almost goes without saying that conversion from nonprofit to for-profit status increases the pressure to generate more profits. As one nonprofit proponent noted, for-profit insurers have a "legal, ethical, and fiduciary duty to maximize profits for shareholders." An expert on corporations law explained that the main objective of for-profit managers is, and should be, "shareholder wealth maximization," whereas the goals of nonprofit managers are defined by "their particular constituencies." A published authority points out that "shareholder wealth maximization is not only the law, it is also a basic feature of corporate ideology" (Bainbridge 2002, 417). This is not necessarily a negative observation, for an incentive to increase profits can produce better customer service, more product innovation, and greater efficiency through lower overhead and better control of medical costs. Also, if a conversion foundation is created, higher profits will raise the value of the stock held by the foundation (although Blue Cross Blue Shield Association rules require these foundations to divest themselves of their BC stock within ten years). But profit incentives also can have some negative consequences for the public interest, which we discuss later.

Although not-for-profit organizations also have good reasons to generate profits in order to pursue their mission, for-profit conversion intensifies profit incentives because the managers of publicly held companies are highly sensitive to how their operations are perceived by the investor community. A national expert explained that for-profit insurers "will have to get their 15 percent growth and their return on equity to keep [stock] analysts happy." An observer in Virginia said that Blue Cross there has to "dance the dance for financial analysts and investors; they have to perform." The pressure this creates was explained by Leonard Schaeffer, the long-time CEO of Wellpoint, which owns for-profit BC plans in California, Georgia, and Missouri:

> There is no question that the pressure for economic performance and thus accountability to investors is very real. . . . Stock analysts who follow companies want them to perform to their calculated profit estimates every quarter. Having said that,

> though, . . . there was almost no change in how we behaved [following conversion]. We were [already] one of the most profitable plans in the United States. However, when we became publicly held, and listed on the stock exchange, for the first time ever there were incredible pressures for achieving our goals for quarterly earnings. (Iglehart 1995, 135)

In our interviews, a market analyst pointed out that these pressures affect the entire management team across a wide range of activities, in part because managers benefit directly from stock incentives. He explained that these effects are not always very visible, since "there are a zillion ways to target more profitable business segments" through incremental decisions about underwriting, marketing, claims payments, and the like.

Some industry analysts we interviewed observed that the investor community is not satisfied simply with achieving a profitable plateau, because investors look for continual improvements in financial results. Although for-profit managers may speak in terms of hitting certain targets, the targets tend to be reset to encourage continuing growth in profits. As one industry adviser put it, for-profit insurers basically just "try to make as much money as they can." National experts noted that in contrast, nonprofit BC plans have an expectation or legal requirement of not accumulating too much surplus. Since they cannot pay out their earnings through dividends, at some point if they are successful they may reach a stage where it is not necessary to continue earning more profits. Some BC plans have even paid back excess surplus to policyholders in the form of rebates or rate reductions, often under pressure from regulators and sometimes as a result of policyholder lawsuits.

The effect of profit incentives is borne out in the comparative financial performance of for-profit and nonprofit BC plans nationwide (table 1). Over the most recent five years for which data are available (1997–2001), the underwriting gains of for-profit BC plans were roughly one to two percentage points higher than those of nonprofit BC plans, and overall profits, including investment income, were 1.5 to 4.0 percentage points more (before taxes, using weighted averages). (This conclusion is confirmed by most, but not all, of the similar recent analyses we reviewed, each of which used somewhat different metrics, data sources, and/or sampling frames.)

TABLE 1
Blue Cross Blue Shield Plan Profitability by Ownership Status, 1997–2(

	Percentage of Revenues			
	1997	1998	1999	2000
Underwriting Profits				
For-profit plans[a] (minimum)	−11.9	−3.7	−6.3	−4.7
For-profit plans (maximum)	3.7	4.5	3.9	4.0
For-profit plans (unweighted average)	−2.8	0.3	−0.5	0.9
For-profit plans (weighted average)	−0.2	1.4	0.7	2.1
Nonprofit plans (weighted average)	−1.3	−2.0	−0.4	0.3
Total Profits (includes investment income)				
For-profit plans (unweighted average)	0.7	3.0	1.7	2.3
For-profit plans (weighted average)[b]	3.4	4.5	3.3	4.1
Nonprofit plans (weighted average)	1.4	0.5	1.7	1.9

Notes: Estimates are based on compilations by Ernst and Young of data from source show figures, including minimums and maximums, represent the performance of the overall cor entity rather than individual plans within it. That is, we did not examine separately the indi performance of all eight plans making up the Anthem network.

[a] For-profit plans examined in this analysis include Wellpoint Health Networks, Inc., Blue of Missouri Group, Blue Cross Blue Shield United of Wisconsin, Anthem Insurance Cor Group, and Trigon Healthcare, Inc. (Wellpoint acquired Blue Cross of Missouri Group in so for the period shown, these were separate plans.)

[b] The for-profit weighted average is skewed somewhat by the much-better-than-a performance of Wellpoint, which is also by far the largest plan. If conversion is viewed as of the dice" in which there is an equal chance of ending up with the average performance of the five for-profit companies we examined, then the unweighted averages may be a measure of what might be expected following conversion. When using unweighted average treating each company equally), underwriting profits overall are lower than when using we averages.

Source: NAIC (2001). Analysis of data by authors and Ernst and Young.

This consistent pattern over five years indicates the potential of stock ownership to motivate management to improve financial performance. This potential is also seen in the profit trends of the four BC plans that underwent freestanding conversions several years ago. When Blue Cross of California first began converting, it was nearly bankrupt, but after it converted, its overall profit margins have consistently been among the highest in the industry. Blue Cross in Georgia steadily increased its operating margin one to two percentage points a year following its conversion, prior to Wellpoint's acquisition. In 2001, the first year under Wellpoint, its operating margin jumped four percentage points. Profitability has also improved steadily in Missouri and Virginia following conversion. In Missouri, Blue Cross's net income rose almost 600 percent from 1998 to 2000, and in Virginia, the press reported in 2001 that the BC plan had exceeded Wall Street's expectations every

quarter since it went public.

These statistics do not prove, however, that for-profit status is a guarantee of profitability. In the national comparative data reported in table 1, at least one for-profit plan lost money on underwriting in each of the five years, and profitability levels were relatively modest overall (compared with before-tax profits in 2000 of 8.4 percent in manufacturing and 9.1 percent for nondurable goods manufacturing). Even the most profitable plans made only 3.7 to 4.5 percent on underwriting, reflecting the competitive industry in which these plans operate. And, even when adding investment income, the plans' profitability as a group was only 6.5 percent in the best year (2001). Finally, this track record does not prove that these particular for-profit plans had higher profits than they would have had if they had remained nonprofit, since almost all BC plans have become more profitable in recent years (Cunningham and Sherlock 2002). However, the consistency and level of profitability achieved by these converted plans suggest that conversion has improved profitability compared with the performance of most nonprofit BC plans over the same time period (Schramm 2001a).

Comparing Nonprofits with For-Profits

Acknowledging that conversion increases profit incentives does not, however, determine the impact of these incentives on how BC does business. In large part, the differences are fairly subtle because nonprofit insurers also are under many of these same financial pressures. Both national and local experts explained to us that all Blue Cross plans are much more market oriented in the current environment than they were ten to 20 years ago, regardless of their corporate form. The advent of managed care in the 1980s made health insurance markets much more competitive, forcing all BC plans to abandon ways of doing business that once made them markedly different from commercial insurers. BC plans were once run by providers, and they voluntarily used business practices like community rating that were much more accommodating to people with medical problems. Now, however, such notable features are historical artifacts, gone from virtually all BC plans around the country.

In each of our conversion study states, interview subjects explained that financial problems had caused their BC plan to "change its stripes" in the years before conversion, by bringing in new management that had a much more market- and profit-oriented business approach. Conversion was seen as a continuation of this change toward behaving more like any other commercial insurer, though it was not the main catalyst of these changes. Therefore, when conversion actually took place, most of our subjects found that it caused little or no noticeable change in how the BC plan did business and that the BC plan would have continued to behave in largely the same way even if it had remained nonprofit, since it was under the same management team. As several subjects put it, the conversions in these states were the *effect* of a change in corporate culture, rather than its *cause*, since the management team that pushed for the conversion had already instituted a for-profit culture before the conversion.

We do not conclude from these sources, however, that conversion made no difference in how BC plans operate. We did *not* use our state-focused case studies to compare converted BC plans with nonprofit plans in other states that did not intend to convert. Had we done so, the consensus among industry experts is that we could have detected differences in their corporate ethos and business strategies. For instance, we spoke with one highly knowledgeable industry adviser who worked at and with both for-profit and nonprofit health plans, including both BC and non-BC plans. He said that there is a "subtle but important difference" between nonprofit and for-profit health insurers: "In a very fundamental way, they operate differently." Other market-oriented analysts noted that nonprofits have "more flexibility to consider community needs." In the view of one observer, for "nine out of ten individual decisions" regarding pricing, underwriting, provider contracting, and so on, "they'll decide the same thing, but the issue is, what is the impact of the one-in-ten decision where they will differ? The difference can be significant." In California especially, many people commented that Blue Cross stood out as being especially profit oriented and aggressive in its business strategies, even compared with its non-BC competitors.

Academic researchers also have looked at potential differences between nonprofit and for-profit health plans, comparing the performance of each type of health maintenance organization (HMO). Some studies favor nonprofit HMOs (Himmelstein et al. 1999; Kuttner 1998; Landon et al. 2001;

Nudelman and Andrews 1996; Schlesinger, Mitchell, and Gray 2003; Tu and Reschovsky 2002), whereas others find few or no differences (Blustein and Hoy 2000; Born and Simon 2001; Feldman, Wholey, and Town 2003). Overall, although the evidence is mixed, it suggests that members of nonprofit HMOs are more satisfied and receive better service and a somewhat higher quality of care than do members of for-profit HMOs, and that nonprofit HMOs provide somewhat more community benefits. However, more limited evidence also indicates that for-profit HMOs have *lower*, not higher, premiums (Feldman, Wholey, and Christianson 1998; Wholey, Feldman, and Christianson 1995) and that the profit levels of these two types of HMOs are not substantially different (Bryce 1994; Feldman, Wholey, and Town 2003).

We hasten to note, however, that these findings do not resolve the issue before us, since they look only at HMOs, not at health insurers generally or Blue Cross plans in particular, which have a unique market status and operate in somewhat different market and regulatory environments than do pure HMOs. More important, such studies typically do not account for significant differences among patients enrolled in different types of plans. In Medicare HMOs, for example, the people in for-profit plans are much poorer and less educated than their counterparts in not-for-profit plans (Blustein and Hoy 2000). Of even greater importance, only one of these studies compares plans before and after a conversion. All the others compare nonprofit HMOs with for-profit HMOs. Since many of the nonprofits are BC plans and most of the for-profits are not, these studies provide only limited insight into differences resulting from the conversion of a BC plan. Finally, evidence of financial performance from many years ago is of questionable relevance in today's marketplace. Therefore, we return to the path on which we began: examining the changes that are likely to result from increased pressures to generate profits.

Administrative Costs and Medical Loss Ratios

If profit goals were met entirely through lower administrative or overhead costs, few public policy issues would be raised (the main impact being lower commissions for insurance agents or the loss of some insurance jobs). Historically, there is some evidence from the 1980s or earlier that nonprofit BC plans may have been less efficient than their commercial for-profit counterparts, resulting in their competitive advantage benefiting management and employees through higher salaries, larger staffs, and more pleasant working conditions (Blair and Vogel 1978; Frech 1976, 1980), but this literature is very dated and other studies during this period found no difference in efficiency (Mennemeyer 1984; U.S. GAO 1975). Regardless, shareholders' profit expectations might make BC plans focus more on lowering administrative costs. Conversion, however, usually also results in the plan's having to pay higher state premium taxes. Also, BC plans that convert in order to pursue acquisitions or raise capital for new ventures will incur new overhead costs associated with these activities.

In principle, merger or acquisition can make a plan more efficient through economies of scale. But evidence of economies of scale in health insurance is mixed, in part because it is difficult to isolate pure economies of scale from differences in efficiency, especially given the many different administrative functions that insurance companies must perform (see Feldstein 1999, 179–80). An early multivariate study using data from the early 1970s did find economies of scale for commercial insurance plans but not for Blue Cross or Blue Shield plans (Vogel and Blair 1975). But a follow-up study using data from 1958 to 1973 suggested that economies of scale were smaller than previously believed and that none existed in the administration of Medicare claims, possibly because the latter used cost-based reimbursement, thereby diminishing the incentive to hold down costs (Blair and Vogel 1978). A multivariate analysis of 1986–1988 BC data showed that size within a state appears to provide a substantial administrative cost advantage.[1] More recent data appear to show no large economies of scale across state lines among commercial insurers (Blackstone Group 2002) or BC plans (Schramm 2001b), which Schramm attributed to difficulties in consolidating distribution, marketing, claims handling, and provider relations within geographically diverse managed care companies (Schramm 2001b). Both the Blackstone Group and Schramm analyses, however, are based on observing raw differences in expense or profitability ratios across plans of different sizes, without adjusting for market or plan characteristics that might drive these results. In any event, it is noteworthy that conversion alone confers no size advantage: Only conversion coupled with merger might, and nonprofit plans can merge without converting.

In sum, there are no well-documented efficiency benefits from merger or acquisition among BC

plans.[2] In California, Wellpoint's expense ratio has been essentially level since 1997, and there is contradictory evidence for earlier years, with one source even indicating that BC's expenses may have increased after its initial conversion. One analysis found that Blue Cross of California's administrative costs are almost four percentage points higher than expected, based on how its operations compare with those of other national HMOs (Feldman, Wholey, and Town 2003).

In Georgia, Missouri, and Virginia, where the converted BC plans did not acquire other plans following conversion, they were more successful in lowering their administrative expenses after converting (before merging later). Nevertheless, there is no reason to believe that a profit-maximizing company will be content with the profits gained solely by reducing administrative expenses. Instead, industry analysts maintained that for-profit insurers can be expected to improve profits in every way possible. These other methods are included in the insurer's medical loss ratio, which is the portion of premium revenues spent on paying medical claims. In general, the loss ratios of for-profit BC plans are about five to ten percentage points lower than those of nonprofit BC plans.[3] In California, several observers reported that Wellpoint's enviable profit level was achieved following conversion mainly by lowering its medical loss ratio (MLR), which is ten or more percentage points lower than that of other major competitors in the state. In Georgia, BC reduced its MLR by three to four percentage points following conversion. In Missouri, BC's MLR has dropped about five percentage points in the past three years. And in both Missouri and Virginia, BC's MLR is significantly lower than that of most other major insurers in the market.

Comparisons of the MLRs of insurers with different blocks of business can be misleading, since MLRs are typically much lower for individual and small-group insurance, due to the higher overhead costs of selling to and servicing smaller units. Still, it is fair to observe *changes* in loss ratios within a single BC plan following conversion or to compare the loss ratios of similar plans, such as those of different BC plans with similar mixes of group and nongroup business. From these multiple perspectives, it appears that conversion tends to lower medical loss ratios. Therefore, we next turn our attention to the factors that affect the MLR. In no particular order, these are premium rates, product offerings, underwriting practices, utilization management, and provider payment rates. The following sections explore each of these factors to determine how the greater profit incentives created by BC conversions have affected them and whether these effects raise concerns about accessibility, affordability, and the public interest generally.

The Possibility of Lower Rates

We first consider whether conversion will result in *lower* prices for health insurance. This is theoretically possible if equity is a more efficient source of capital than debt or retained earnings. For-profit health insurers generally maintain substantially lower, but still adequate, levels of reserves than do nonprofit BC plans (Blackstone Group 2002; Conning and Company 2000). One explanation for this is simply that nonprofit BC plans have nowhere else to put their earnings, since they cannot pay dividends. A second is that publicly traded plans like to have fewer reserves in order to show investors a better return on equity, given the same income. Third, a nonprofit health insurer's primary source for raising capital is through operating income, which creates a greater need for a buffer against price wars and downsides in the underwriting cycle compared with that of publicly traded companies, which can raise capital when they need it by issuing more stock. (Although both nonprofits and for-profits can also raise capital by issuing debt when they need to finance improvements or operations, debt capital does not meet regulators' demands for adequate reserve levels because of the associated interest costs and repayment obligations.) For these reasons, conversion can relieve the pressure of having to increase premium income to meet capital needs.

Despite these possibilities, the national experts we interviewed did not think that, by itself, improved access to equity capital was a compelling reason under current conditions for financially healthy BC plans to convert. One national expert thought that BC plans with a strong market share should have no trouble raising the capital they need for business innovations, even though they are nonprofit. Another expert noted that in recent years, most for-profit health insurers chose to raise capital through debt rather than equity, and another expert observed that in the last few years, for-profit insurers' primary need for major amounts of capital was for new acquisitions, not for improving operations (Blackstone Group 2002).

Another reason that conversion might result in lower premiums is a theory advanced by Feldman, Wholey, and Town (2003) that people have inherently less trust in for-profit health insurers and so the market compels these insurers to charge lower prices for equivalent products in order to overcome this reluctance to buy from them. Feldman, Wholey, and Town (2003, 2) presented evidence consistent with this theory in an analysis of HMO conversions over 15 years, which concluded that "HMOs reduce their premiums by a small but significant and permanent amount [about 4 percent] when they convert to for-profit ownership." This analysis has a number of significant methodological limitations, however, that make its findings of questionable relevance to current BC conversions.[4] Feldman and his colleagues analyzed only HMO conversions, not conversions by preferred provider organizations (PPOs), which are BC's dominant plan type. Also, two-thirds of the conversions in this study were carried out more than ten years ago, and most of them resulted from health plans that were in financial distress and were not market leaders. The current market conditions for BC plans are substantially different. Finally, these analysts were unable to measure or control for changes in covered benefits or the composition of risk pools. Therefore, the lower premiums they detected may have reflected fewer benefits or more aggressive risk selection rather than lower prices or profits.

The Limited Evidence Regarding Higher Rates

Regarding the potential for *higher* rates, none of the states we studied indicate that conversion has resulted in substantially higher rates overall. Most insurance agents, regulators, industry observers, and even patient advocates thought that the converted BC plans were pricing their products in line with their competitors, that higher medical costs have been the primary drivers of BC's rate increases, or that conversion did not cause rates to rise. One keen observer of the California market, for instance, said that keeping rates affordable was key to BC's business strategy there because it wants a larger market share in order to have more bargaining power in negotiating with providers, so it tries to increase its profit margin by lowering provider payments rather than increasing its premiums. Moreover, even those interview subjects who thought conversion could or might have caused rates to rise spoke only in terms of modest one-time increases rather than sustained increases year after year that amounted to large, double-digit price differentials. There was broad agreement that the major factor driving group rates was rising medical costs and that, in general, competition was effective in restraining rate increases that are significantly greater than medical cost trends.

The sole quantitative analysis we were able to find compared Blue Cross of California's average HMO premium revenues with the "expected" value of average HMO premiums based on a prediction equation derived from examining all HMOs in the United States from 1986 to 2001. The company's HMO premiums were lower than predicted before conversion. In the two years afterward, from 1996 to 2000 (1997 data were missing), its HMO premiums were higher than expected but returned to lower than expected in 2001 (Feldman, Wholey, and Town 2003). These analysts interpreted this to mean that Blue Cross of California once was a low-priced HMO, became a high-priced HMO after conversion, and now may have returned to being low priced (although this last conclusion is based on only a single year of data). Earlier we cited some of this study's limitations, and accordingly, we do not give these assessments more weight than those of our interview subjects. But they are consistent with the story that Blue Cross initially built up its membership base with lower premiums, which then gave it additional market power that it was able to exploit several years after conversion, but that more recently competition has forced it to slow the growth of its premiums. This study also is consistent with the story that Blue Cross historically used its competitive advantage as a nonprofit at least partially to benefit consumers through lower premiums, as opposed to benefiting management or providers of care.

Regardless of how we resolve the postconversion evidence in any particular state, it sheds little light on what we can expect to find in other states facing Blue Cross conversions, because as several national experts stressed, each market is different. For instance, in two of the states we studied (California and Missouri), the converted BC is not the overall market leader, as it is in most states. Also, our interviews focused mainly on rates in the group market and did not examine each market segment separately, including the market for individual health insurance and Medicare supplemental insurance, in which a particular BC plan might dominate. Therefore, the conclusions from our study shed little or no light on these particular market segments.

The second important caveat that national experts stressed is that it is "impossible to prove" what factors have driven rate increases and to what extent—even after the fact, looking back in time, much less looking forward. Documenting exactly what happened is especially difficult because the regulators in the states we studied do not track insurance rates, so our main source of information was the informed views of market participants and observers. Even these highly knowledgeable subjects often had difficulty drawing conclusions.

Nonprice Impacts

This section reviews the possible impact of conversion on a host of nonprice factors that affect profitability, including product offerings, geographic coverage, underwriting, managed care, and provider contracting.

Insurer of Last Resort

Historically, Blue Cross plans were usually the insurer of last resort in their state, meaning that they offered some type of coverage for people who were medically uninsurable and could not find coverage elsewhere. Blue Cross originally offered last-resort insurance as part of its corporate mission, but eventually many states explicitly tied this undertaking to the BC plans' nonprofit status and their exemption from some or all premium taxes. In more recent years, however, legislative developments in many states have relieved Blue Cross plans of this role, by either requiring other insurers to perform a similar function or meeting this need through a high-risk pool funded by industrywide assessments. According to the trade organization Communicating for Agriculture (testimony to Congress, January 29, 2002), BC plans still act as an insurer of last resort in only six states and often to only a limited extent: Maryland, Michigan, North Carolina, Pennsylvania, Rhode Island, and Virginia.

Accordingly, a change in BC's last-resort status is usually not an issue in conversion proceedings. So far, this has been true even when the BC plan still serves a last-resort function, because the function is often limited in a way that makes it consistent with for-profit status. Virginia is the only state so far where a BC plan had a last-resort role when it converted, and it has continued to serve in that role. Likewise, in North Carolina, the BC plan pledged to continue offering its last-resort product after conversion, and the Maryland BC plan said that conversion would not affect its last-resort role. In Virginia and Maryland, however, the last-resort obligation is directly subsidized by an earmarked premium tax reduction, so that the plans are in the same financial position regardless of whether they offer a last-resort product. In North Carolina, the BC last-resort policy has fewer than 100 subscribers and costs the company less than $100,000 a year because it is priced at about $20,000 a year per subscriber. Therefore, the loss of an insurer of last resort is rarely or never a concern in a BC conversion.

Product Offerings and Geographic Coverage

This section considers whether BC conversion has positive or negative impacts on product offerings and geographic coverage. We divide our discussion between major product markets, such as individual and small-group, and secondary product markets, such as Medicare supplemental and association health plans, and between product markets generally and geographic markets, such as rural versus urban areas.

In states where BC conversions have been in place for several years, the conversion has not resulted in Blue Cross's pulling out of *major product* markets. In particular, these BC plans have remained committed to individual and small-group markets, and they have continued to cover their entire geographic regions. To the contrary, remaining strong statewide and in the individual and small-group markets are the key business strategies of these BC plans.

Regarding *geographic* coverage, several interview subjects suggested that as nonprofit companies, BC plans are under pressure from the public and regulators to operate statewide, but as for profits, this social conscience may weaken, resulting in gaps in rural markets. But such a change in orientation could occur regardless of conversion. Moreover, there is little or no evidence that

converted plans have changed their basic orientation toward statewide coverage. In our interviews, the worst we heard was that the converted BC plans in some states had withdrawn their HMO products from rural counties but had not left these counties altogether, and the accounts differed as to whether this was the fault of the BC plans or of dominant providers refusing to enter into HMO contracts with any insurer.

Regarding *secondary product* offerings, we detected only minor or scattered concerns. In several states, we heard similar accounts of the BC plans' failure to maintain provider contracts for their HMO networks in some rural counties, but these BC plans had not pulled out of these counties entirely. In Missouri, there were concerns about BC's closure of pools for trade or business associations, leading to steep rate increases for some members, but regulators there said this had resulted mainly from BC's need to comply with new federal and state laws that prohibited the particular form of association group-purchasing arrangements that existed then. Blue Cross in Missouri was one of the first major plans to pull out of the Medicare HMO market, and it did so across the state rather than in selective counties, as other insurers did. In both Missouri and Virginia, it appears that the BC plans withdrew from the Medicaid HMO program after conversion, but details are sketchy. In a November 2001 report, Bear, Stearns—a leading investment analyst—noted favorably that Anthem planned to exit Medicare HMO markets nationally and that Anthem had "minimal" participation in the states' Medicaid managed care programs. The report explained that investors "view the low exposure to Medicaid as important, given the deteriorating fiscal condition of many state budgets."

In California, a few interview subjects criticized Blue Cross for refusing to participate in the small-group purchasing cooperative and attributed this to its desire to avoid higher risks. Others, though, attributed this to BC's view of the purchasing cooperative as a threat to its strength in the small-group market and its desire to compete directly against the cooperative rather than to join it. Many sources in California praised BC for being "about the best" of all private insurers—including nonprofit insurers—in its participation in low-income government programs. Blue Cross of California is by far the largest participant in the state's Medicaid managed care program; it administers the state's high-risk pool, and it is a major participant in the Children's Health Insurance Program for low-income children. These sources thought that BC was making a profit from these government programs; otherwise it would not be participating. But they also added that BC seemed eager to have this business, even though the profit margins were slim, in part because this gave it more leverage with providers in negotiating lower payment rates for their commercial products. Blue Cross of California has withdrawn its Medicare HMO products from a number of counties, but it did not have a large enrollment and the impact was much greater when other insurers also withdrew. BC no longer serves as a Medicare contractor for claims processing.

In the private market, interview subjects said Blue Cross of California is known for being a continuing innovator in product design, a "visionary" that is "always five steps ahead" of the competition. As we note later, however, some skeptics believe that frequent changes in product design may result in greater risk segmentation. In addition, some people expressed concern that Blue Cross's bare-bones policies may not offer adequate protection or may mislead less sophisticated purchasers.

On balance, there is no strong evidence that conversion has had a substantial negative impact on Blue Cross's major product or geographic availability. Culling specialized products and focusing marketing efforts geographically are widespread practices, even at nonprofit plans, as is the normal give-and-take in provider negotiations. Although provider negotiations may intensify following conversion, as we discuss later, for-profit plans have profit-driven incentives to continue offering and improving their principal products and to maintain at least some presence statewide. The one significant basis for concern we detected would be if BC plans failed to offer their normal products at reasonable prices as replacement coverage for subscribers who are displaced when older or secondary products are closed out.

Underwriting and Other Risk Selection Practices

Another way that BC plans might try to increase profits is by more aggressively or selectively distinguishing between lower and higher subscribers. There are several ways to engage in risk

selection, including product development and marketing, but the most direct method is through underwriting. Being able to identify and accurately price each individual or group according to its particular health risks gives an insurer a competitive advantage. This explains the historical move by all BC plans from community rating to experience or risk rating. Many people see this movement as contrary to the public interest because it undermines the pooling of risk that keeps insurance affordable for less healthy people who need it the most. Alternately, more accurate risk selection makes health insurance more affordable for lower-risk people, which might encourage more people overall to buy insurance. Because both views of the public interest are credible, we report our findings on the potential for conversion to change underwriting and other risk selection practices so that these findings can be evaluated from either perspective.

According to interviews and other sources (Cunningham and Cunningham 1997; Friedman 1998; Grossman and Strunk 2001), the time has passed when BC plans were much more lenient underwriters than other insurers, and underwriting practices and policies at nonprofit BC plans are now broadly consistent with those of for-profit insurers. Areas where large differences once existed have now been usurped by legislation. For instance, federal law prohibits all insurers from turning down any small-group purchaser, and most states require all insurers to use consistent rating practices that limit how much more they can charge the highest risks relative to the lowest.

In states with BC conversions in place for several years, we heard some, but not a great deal of, concern about the conversion's leading to more aggressive underwriting or risk selection practices. In most states, our interview subjects thought that the converted BC plans were "in the middle of the pack" in their underwriting or even somewhat lenient. For instance, in two states, subjects reported that the converted BC had not raised rates for higher-risk small groups as aggressively as other insurers had.

The most criticism came from California, where Blue Cross has a reputation as an aggressive but fair underwriter. Several subjects felt that BC was more "sophisticated" than most other insurers at selecting good risks and segmenting risks, and that its expertise in this regard was one of the keys to its success, something that other insurers were "envious of." Two subjects thought that BC "crassly" manipulates benefit coverage and product design to enhance favorable risk selection and risk segmentation. Similarly, in Missouri, some subjects observed that BC no longer includes maternity coverage in its individual policies unless purchased as a rider, unlike United, which spreads the cost of this coverage across all its policies. In California, it also is noteworthy that in 1998, BC changed its rating for Medicare supplemental policies to a method that increases the rates as the member ages.

On balance, there is some basis for concern about conversion resulting in further tightening of various underwriting practices, but these practices are too subtle and complex to determine which ones are due to conversion and which have evolved from market-driven business practices. Therefore, for the most part, changes in various underwriting practices in response to increased profit pressures is one of the difficult-to-quantify tradeoffs that must be weighed against the potential benefits of conversion.

Customer Service, Utilization Management, and Community Focus

There is little or no evidence that conversion has had an adverse effect on customer service or managed care practices, and indeed, conversion may well have improved the performance of some BC plans in these areas. We found no strong indication that conversion has caused BC plans to drop their service levels or to intensify their managed care restrictions. An analysis of HMOs serving federal employees found that conversion did not significantly change customer satisfaction scores for three HMOs (Feldman, Wholey, and Town 2003). In California, BC has improved its customer satisfaction noticeably in recent years and now has one of the best ratings of the state's largest plans. In other states, converted BC plans are seen as being more "in the middle of the pack." However, problems were noted in Missouri, where BC's complaint rate is higher than that of most other major insurers and several times higher than that of the nonprofit BC plan in Kansas City. (For a somewhat different analysis, focused on Wellpoint, see Delmarva Foundation for Medical Care 2003, which concluded that the complaint records of the converted BC plan in California were worse than the state average but that in Missouri the plan received an average number of complaints.)

One issue of concern, raised several times in our interviews, is that conversion makes BC plans vulnerable to acquisition by a larger out-of-state company. Wellpoint, which is based in California, acquired the converted BC plans in Georgia and Missouri. Anthem recently acquired the converted BC plan in Virginia, and it owns BC plans in eight other states, mostly in the Midwest and Northeast. Some market observers and participants felt that acquisition could be bad for policyholders since it diverts capital and attention away from improving products and customer service in the plan's home state. Two market analysts thought that outside ownership "tends to change" how "community-oriented" management is, making it less likely to be "swayed" by local concerns. They believed that this attitude could result in a "different perspective," under which management is less amenable to making concessions regarding pricing, underwriting, and maintaining certain risk pools. According to one market analyst, this local/outside difference is a bigger factor than the nonprofit versus for-profit corporate form in shaping corporate attitudes and policies.

None of our case studies allowed us to pursue this issue in depth, and Georgia was the only state where we conducted any interviews after an outside acquisition. There, several subjects said that the *original* conversion did not affect Blue Cross's corporate culture and market behavior. But many felt that the sale to Wellpoint had had a discernible effect. For instance, one person said that BC had become more difficult to deal with and less responsive to working out problems. Other interview subjects, however, felt that its operations and attitudes were essentially the same under Wellpoint as before.

Provider Contracting

The final concern is whether conversion causes Blue Cross plans to change how they contract with physicians and hospitals, for instance, by demanding lower payment rates or limiting the number of providers in a network. Before evaluating this issue, however, we need to determine whether this is a matter of broader public interest or a concern mainly of providers. In any market, suppliers generally seek the highest feasible price for their services, and buyers want to pay the lowest. Often, there is no public policy problem with allowing the give-and-take of market forces to determine the outcome. In an ideal world, Blue Cross serves as a purchasing agent for its subscribers, who want convenience and freedom of choice but also do not want to pay too much for health care. To the degree that a BC plan can use its market power to reduce payments to providers, the public will benefit, even though hospitals and physicians will be paid less than they might prefer—assuming some of these savings are passed on to consumers. There is no compelling public interest in paying providers more than the amount needed to supply the "right" amount of medical care to consumers. This theoretical analysis suggests that it is not necessarily contrary to the public interest for BC to bargain hard with its providers or even to fail to reach an agreement with some providers.

In actual health care markets, however, there is the risk that a dominant insurer will behave as a "monopsonist" (i.e., a monopolistic buyer) with respect to providers of health care. Monopsonists generally wish to pay lower prices than would prevail under perfect competition, resulting in less adequate services being supplied than is optimal for social welfare. This might be seen, for instance, in provider contract terminations that cause disruptions in patient service or critical gaps in the provider network that compromise optimal care or perhaps make insurance unavailable in some regions. Moreover, even if perfect competition prevails, driving down provider payments might be contrary to the public interest if this made it impossible for hospitals to serve members of the community without insurance or to continue offering essential services that are not fully compensated and so need to be cross-subsidized by "excess" payments through private insurance. These unprofitable but essential medical services are called "public goods" in the jargon of economics, and competitive markets tend to underproduce public goods. We next review the available evidence to determine whether concerns about changes in provider contracting implicate any of these public policy issues.

Historically, there is some evidence that BC plans used their market power and other competitive advantages to benefit providers who tended to dominate BC boards (Arnould and DeBrock 1985; Arnould and Eisenstadt 1982; Eisenstadt and Kennedy 1981; Frech and Ginsburg 1978; Hay and Leahy 1984; Kass and Pautler 1981; McCann 2003). These studies imply that when competitive advantages were not diverted to plan administrators through higher administrative costs, the benefits apparently went to providers in the form of higher reimbursement. But more recent

evidence from the 1980s shows that a greater BC market share is associated with lower provider payments (Foreman, Wilson, and Scheffler 1996).

In the most recent years, BC plans' relationships with providers, especially hospitals, have been deteriorating nationally, as they have been increasingly assertive about exercising their market power, which has resulted in more contract terminations. Such terminations are more common in large markets than in medium and small markets, which is encouraging, since it implies that even if terminations increase in frequency, this will not usually result in geographic-access barriers. In some of the states we studied, especially California, we heard about several instances of hospital contract terminations with BC that disrupted patient care. But we also heard differing accounts of which side was at fault and whether this was due to conversion or was the result of market turmoil that would have occurred in any event. In addition, complaints of this nature were not registered very strongly in Georgia or Missouri (see also Delmarva Foundation for Medical Care 2003 regarding Maryland). In Georgia, the number of physician and hospital contracts for both PPO and HMO products roughly doubled after its conversion in 1996; BC of California also saw a general rise in its physician and hospital contracts for PPO and HMO products between 1994 and 2000 (Accenture 2002).

Other Public Policy Issues

Political and Social Orientation

In addition to the particular areas of concern addressed so far, we inquired more broadly into whether conversion affected Blue Cross's role in the political, community, and public policy arenas generally. BC is often the single most influential private institution in a state's health care delivery system and usually also wields considerable political power within state government. If conversion were to produce a major change in the orientation toward health care public policy issues, this could have a significant, and perhaps profound, effect on a state's future health policy.

Similar issues arise in the regulatory arena. Several national experts noted that it was "easier to regulate" nonprofits and to "get them to work for the public good," since you can "ask more of nonprofits" in regard to pricing and access for vulnerable risk groups. One pair of experts, who had researched health insurance markets nationally, reported, for example, that "several plans noted regulators' expectations that the Blues accept the enrollees from plans that have gone bankrupt" (Grossman and Strunk 2001, 51). The question, then, is whether a converted BC continues to be as amenable to this kind of regulatory pressure or persuasion.

In Missouri, several interview subjects noted that after conversion (but before Wellpoint's acquisition), the legislative and public policy positions of the BC plan there had become much less socially oriented. One seasoned advocate emphasized that conversion was a very discouraging "watershed" that ratified or cemented the flaws of the current system and "gave up the ghost" of any realistic hope for systemic or fundamental reform. In Maine, Community Catalyst, a national opponent of BC conversions, has criticized Anthem because after its out-of-state acquisition of BC in Maine, Anthem began to press the state to loosen various restrictions on rating and product design.

We heard a different account in Virginia (before Anthem's acquisition). There, one observer said that BC was very conscious of how it was viewed from a political standpoint by the public, the press, and the regulators, and that this constrained its behavior to some extent. Several people thought that BC was still trying to craft workable solutions to public policy and regulatory issues in Virginia. But two cynics maintained that BC in Virginia did not "really care what people think because they don't have to," due to their size, and that BC "like[d] to be perceived as caring about the community" but the feeling was not genuine.

Considering these differing views, there is some basis for concern that conversion may affect BC's role in political, regulatory, and public policy affairs. Although it is impossible to gauge the extent of this concern, even in qualitative terms, perhaps the best guess is the view expressed by one expert, who believed that whatever political constraints and social orientation existed before conversion would remain in a lesser form, though still to some extent, considering the BC plans' size, history, and ties with their communities. Conversion, however, had made it much easier for BC plans to be

acquired by a larger, out-of-state plan, such as Anthem or Wellpoint, which this expert thought might reduce the degree of local community involvement or responsiveness.

Increased Taxes and Foundation Benefits

One health economist has noted that "health ownership conversions hold out the possibility for unlocking community assets and making them available to finance new socially beneficial initiatives" (Robinson 2000, 67). When weighing the balance of public interest considerations flowing from conversion, it is critical to consider the benefits from the tremendous endowments of conversion foundations, as well as the public benefits that come from the additional taxes that a for-profit BC usually must pay. In recent conversions, BC plans often propose putting most or all of their initial stock into a new foundation devoted to health policy goals statewide. On account of the strength and size of most BC plans, this can create a very large foundation that can do a lot of good. In California, where two foundations were created and are worth more than $3 billion, our interview subjects expressed strong enthusiasm for the role of these foundations in health policy statewide: "absolutely wonderful," "huge positive benefits," "major impact." Some observers pointed out that a foundation funded by the health insurer's own stock creates a "win-win" situation because the better BC is at earning profits, the more good the foundation can do since the more its stock is worth. (This relationship, however, lasts only as long as the foundation owns the stock, and such foundations usually are required to divest themselves of Blue Cross stock after a few years.)

Despite this tremendous potential, it is not clear that the revenue stream from these foundations is enough to directly offset all the possible affordability and accessibility consequences of conversion. Accordingly, these foundations need to be viewed in proportion to the very large size and influence of the BC plans that converted, and therefore in relation to the magnitude of these potential impacts of conversion. On a pro rata basis, foundation funding usually amounts to only a few tens of dollars per BC subscriber each year, so only a minor impact on every BC subscriber (such as a rate increase of 1 percent) could match this benefit.

A second consideration is whether foundation funds will be spent on improving accessibility and affordability or instead will be used to promote health in other ways that do not directly counteract the potential impacts of conversion. An extensive analysis of BC conversion foundations, conducted for Maryland's insurance administrator, reported that although only a "relatively negligible portion" (1.8 percent) of BC foundation funding goes "toward programs that provide subsidies for health insurance," one-third of foundation funding directly supports the delivery of care through grants to clinics and hospitals (LECG 2003). Most notable is the California Endowment, which spent more than $100 million over four years to support low-income clinics and to help subsidize the state's high-risk insurance pool.

These foundations are not viewed, however, as permanent sources of support for significant numbers of people who cannot afford or obtain health insurance or health care. The bulk of BC conversion foundation funding (roughly two-thirds) has gone to research, public policy advocacy, and education (LECG 2003). Likewise, most of the people we interviewed saw the primary goals of these large foundations as heightening community awareness of health policy issues, mobilizing support for legislative action, funding research that generates information and ideas for the public policy arena, and funding pilot demonstration projects. Although these are worthy activities, their impact on alleviating the plight of those affected by higher premiums or tougher underwriting policies is uncertain. As one observer commented about the California Health Care Foundation:

> In a profound bit of irony, [it] used funds flowing from the conversion in a recent research effort which found that an increasing number of non-poor people in California have dropped or been dropped from health insurance. The money to finance the research was previously available for community rating of insurance premiums.

Moreover, most BC conversion foundations have pursued many objectives other than accessibility and affordability. "For example, [these] foundations have moved into areas such as violence prevention, environmental health, youth smoking and substance abuse prevention, and basic research, analysis, and healthcare database development of healthcare information" (LECG 2003, 40). The same is true for hospital conversion foundations, which, according to one national expert,

have "redefined themselves to have broader public health purposes than providing direct patient care . . . [or] subsidizing health insurance for uninsured workers and their families" (Kane 1997, 233). In New York, most of the proceeds from the Empire Blue Cross conversion did not go into a foundation but instead will be spent on health care workers' salaries and various state-funded health care programs, which will exhaust these funds within two or three years (Robinson 2003; Strom 2002). Although the goals are health related, they are a far cry from what advocates had originally hoped. Similarly, the conversion foundation in Wisconsin funds medical research, and in Virginia a small trust fund was created to defray state budget items.

To the extent that foundations pursue goals other than directly subsidizing the accessibility and affordability of health care, it is difficult to weigh a foundation's benefits against a conversion's accessibility and affordability detriments. This observation is not meant to detract from the very real public benefits of pursuing other health-related purposes; it is meant only to observe that these broader purposes prevent an apples-to-apples weighing of the pros and cons of a conversion. Therefore, a better strategy is to minimize, to the extent feasible, a conversion's direct and predictable negative impacts on affordability and accessibility and then to look to the foundation's broad range of potential benefits to offset the less observable, more dispersed, and less preventable conversion impacts.

Conclusion

We did not detect any major negative health policy effects so far from freestanding conversions of Blue Cross plans in the states where they have occurred. This conclusion is confirmed by a systematic survey of the foundations created by BC conversions, in which foundation officials "indicated little evidence that [the conversions in their state] resulted in any major adverse impacts on the relevant populations." The study's authors concluded that "at a macro level, previous BCBS Plan conversions do not appear to have caused massive disruptions in their respective state's healthcare . . . delivery systems" (LECG 2003, 33).

The absence of definitive proof of major harm does not mean, however, that conversions are necessarily neutral or beneficial. As we have stressed throughout this article, there is considerable uncertainty about the actual effects of previous conversions due to the complexity of the issues and limitations in available data. Also, each state is different, so even if the historical record is clear elsewhere, it is difficult to predict confidently what the actual effects will be in another state.

One clear effect of conversion is to increase profit incentives. Therefore, the areas of greatest potential concern can be mapped according to the main components of profitability: rates, administrative costs, and medical claims. Conversion may result in higher insurance rates in those market segments where BC plans hold considerable market power and are subject to less aggressive rate regulation. Conversion also tends to result in a lower medical loss ratio, which can be achieved by tougher negotiating with providers and more refined underwriting and risk selection practices. Conversion can also have offsetting positive effects, such as improved operational efficiency and customer service. The largest potential benefit is to unlock considerable wealth that can be devoted explicitly to health-related charitable purposes. However, the result of clarifying the business mission and social expectations of Blue Cross plans is to fundamentally alter the organizational form of the largest, and often dominant, nonprofit institution in health care finance and delivery. This is a sobering step, one that almost certainly will not be undone once it is taken; therefore, it should not be taken without carefully considering the competing health policy implications.

Notes

[1] A national study of BC plans using data from 1986–1988 found that a 10 percent greater plan size is associated with a 1.66 percent lower administrative cost ratio and that a 10 percent greater market share reduces administrative cost ratios by 6.9 percent (Foreman,Wilson, and Scheffler 1996). These relationships also are documented in confidential data developed by Accenture for CareFirst, as reported by the Blackstone Group (2002). Of equal importance, the Foreman study found that a 10 percent greater market share reduces premiums by 6.2 percent but that size per se does not significantly reduce premiums.

[2] An analysis of data for 1997–2000 for many, though not all, BC plans found the following administrative expense ratios (AERs): (1) independent not-for-profit plans (n =19)=13.0%; (2) consolidated not-for-profit plans (n =7)=13.4%; and (3) for-profit plans (n = 4) = 23.4%. As a comparison, the AER for ten commercial plans also studied was 15.3% (Schramm 2001b). However, caution is in order in comparing expense ratios, since without adjustment, plans with a high level of administrative-services-only business (ASO) will appear to have high expense ratios if the administrative costs for ASO activities are included without any counterbalancing premiums or revenues. As an illustration, Anthem's AER for 2000 was 21.2% without adjustment but fell to 15.3% when compared with operating revenue and "premium equivalent" revenue for ASO accounts (see table 5–11 in PriceWaterhouseCoopers 2002). A recent compilation by the Blackstone Group (2002) showed an adjusted AER for Wellpoint of 10.8%; for Anthem, 14.1%; and for Cobalt, 9.4%. The sharp contrast between these figures and those reported by Schramm strongly suggest that his are unadjusted and therefore may be misleading as an indicator of plan performance.

[3] According to one source (Schramm 2001a), for 1997–2000, MLRs for selected BC plans were as follows: (1) independent plans (n = 19) = 83.7%; (2) consolidated plans (n = 7) = 83.8%; and (3) for-profit plans (n = 4) = 73.5%. As a comparison, the MLR for ten commercial plans also studied was 80.1%.

[4] In addition to the points noted in the text, the database used did not include actual premiums or rates. Instead, these analysts constructed premiums by dividing total annual premium revenue by member months of coverage. These constructed measures approximate companywide pricing rather than pricing in discrete market segments. Thus, for example, a shift in an HMO's mix of coverage from large employers to small employers would register an apparent increase in premiums even if the literal premiums for the two groups remained identical.

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